TEXTILE TECHNOLOGY DIGEST

VOLUME 16 JANUARY 1959 NUMBER 1

ABSTRACTS

FIBERS A

INORGANIC FIBERS. C. Z. Carroll-Porczynski. Academic Press, New York, N.Y. 1958. 353 p. $11.00. (1)

Contents: glass fibers, glass textiles, glass textiles in the electrical industry, glass reinforced plastics, glass wools, slag wools, rock wools, refractory fibers, asbestos, asbestos in the plastics industry, asbestos in the electrical industry, other industrial applications of asbestos, recent developments in the asbestos industry, inorganic fiber papers, wire weaving, wire knitting, metal wools, metallic and metalized yarns, metalized fabrics.

FIBER TABLE. A. Wilhelm. Textil-Praxis 13, No. 7: facing p. 740 (1958). In German. Through BCIRA 38: 648 (1958). (2)

The table lists the properties, production, special characteristics, and uses of natural and manmade fibers. This is a revised and supplemented edition of a previously published table.

Natural fibers A1

SOUTH TEXAS 1958 COTTON. F. L. Gerdes (USDA). Textile World 108: 69 (Dec. 1958). (3)

USDA fiber and spinning tests on 1958 cotton from the Texas Coastal Bend area show that in comparison with 1957 cotton yarn strength is up, staple length is average, waste is lower, and appearance is off.

INFLUENCE OF GINNING CONDITIONS AND SUBSEQUENT FIBER PREPARATIONS ON CERTAIN PROPERTIES OF COTTON FABRICS. AATCC. Southeastern Sect. Am. Dyestuff Reptr. 47: P927-P931 (Dec. 29, 1958). (4)

The effects of selected wet preparation methods on cotton fiber are reported. One variety of cotton fiber was selected after both irrigated and nonirrigated growth. Irrigated- and nonirrigated-grown fibers were ginned under three ginning conditions. The six specimen fibers were then treated by certain wet preparation methods. The paper reports the various physical and chemical properties of the various cottons studied, and the effects produced by certain wet-processing methods. Diagr, tables, 10 refs.

EXCESSIVE DRYING AND FIBER DAMAGE. J. N. Grant and C. M. Merkel. Textile Bull. 84: 48, 50-51 (Nov. 1958). (5)

In the cottons studied, sufficient changes in fiber properties were found in the excessively dried lots to affect their processing qualities. The permanent changes in mean length and in quantity of short fibers seem to be responsible for the major effects on product qualities. These fiber length changes are attributed to breakage resulting from mechanical working of fibers temporarily weakened because of low moisture content. Only slight changes in chemical properties could be detected in excessively dried cotton, and none in moderately dried lint.

EFFECTS OF CRIMP AND CROSS-SECTIONAL AREA ON THE MECHANICAL PROPERTIES OF WOOL FIBERS. J. H. Dusenbury and J. H. Wakelin (Textile Research Inst.). Textile Research J. 28: 989-1005 (Dec. 1958). (6)

Report of studies made: (1) to obtain quantitative information about the relationship between visual and mechanical estimates of crimp in wool fibers; (2) to determine the relationships between crimp and the mechanical properties of wool fibers selected from a single sheep and from several sheep representing 5 different wool types; and (3) to learn more about the influence of fiber diameter on crimp and mechanical properties. Tables, graphs, 22 refs.

BEHAVIOR OF WOOL FIBERS IN ELECTRIC FIELDS. D. T. Liddy and J. G. Downes (Wool Textile Research Labs., CSIRO). J. Textile Inst. 49: T467-T477 (Oct. 1958). (7)

Some observations have been made on the way in which long, fine wool fibers behave in electric fields. They provide information on how fibers acquire charge, the distribution of charge, the forces acting on them, and how they move in a field when free to do so. Diagrs, graphs, 7 refs.

OBSERVATIONS ON THE GLYCOGEN OF THE WOOL FOLLICLE. M. L. Ryder (Wool Inds. Research Assoc.). Quart. J. Microscopical Sci. 99, Part 2: 221-228 (June 1958). (8)

The distribution of glycogen in the wool follicle is described; its presence, until recently unsuspected, has been demonstrated in the unkeratinized part of the fiber. Photomicrographs, 27 refs.

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Manmade fibers A2

VERSATILE VISCOSE: THE FIRST PLANNED FIBER. PART 3. INDUSTRIAL USES. J. W. S. Hearle. Skinner's Silk & Rayon Record 32: 1217-1218, 1220-1221 (Nov. 1958). (9)

Following a detailed description of the properties of rayon in tire cords, other uses, such as belting, electric cables, filter cloths, sausage casings, electric insulation, etc., are noted. Tables.

SATURATION REGAIN OF VISCOSE RAYON DEDUCED FROM DENSITY AND SWELLING DATA. M. L. Staples (Ontario Research Found.). Textile Research J. 28: 950-955 (Nov. 1958). (10)

The moisture regain of viscose rayon in a saturated atmosphere has been estimated from measurements of the longitudinal swelling of the fiber at relative humidities ranging from dryness to saturation (water immersion). The density of viscose as a function of the regain has also been determined. From these data, the volume swelling and the swelling of the cross-sectional area of the fiber have been calculated. The latter values, at the saturation regain deduced from the axial swelling measurements, are in substantial agreement with values which other investigators have determined by quite different methods of measurement. Graphs, tables, 25 refs.

PROCESS BY WHICH TERLENKA IS PRODUCED. R. Langendijk. Enka Breda Rayon Rev. 12: 100-107 (Sept. 1958). (11)

The chemical reactions and further processing involved in the manufacture of Terlenka from dimethyl terephthalate and glycol are described. A flow sheet is included. Diagrs.

PROPERTIES AND END-USES OF TERLENKA. J. D. Oostindiër. Enka Breda Rayon Rev. 12: 111-113 (Sept. 1958). (12)

The outstanding characteristics of Terlenka (crease resistance, washability, permanent pleating, high tensile strength, and resistance to abrasion, moths, chemicals, and heat) are pointed out.

YARN PRODUCTION B

FINENESS IS NO. 1 FACTOR IN BLENDING LOW-GRADE COTTON. J. N. Little, W. T. Mathews, Jr., and S. C. Mayne, Jr. (Anderson, Clayton & Co.). Textile World 108: 54-55 (Dec. 1958). (13)

Blending low-grade cottons by fineness can save thousands of dollars a year. Blending by bale densities is also mentioned, as well as what effects to expect in blending white waste and card strips. Graphs.

FIBER BLENDS: COMMENTARY ON THE 43RD ANNUAL TEXTILE INSTITUTE CONFERENCE. J. B. Speakman. J. Textile Inst. 49: P580-P583 (Oct. 1958). (14)

The author reviews the main purposes of blending, and the precautions to be taken.

PROCESSING AND MIXING PROBLEMS OF MANMADE FIBERS. L. Rudolph. Faserforsch. u. Textiltech. 9, No. 5: 168-176 (1958). In German. Through BCIRA 38: 633 (1958). (15)

Literature relating to the processing of fiber blends with different staple lengths and deniers is reviewed, with special reference to the problems arising in the processing and blending of synthetic fibers (preparation of blends containing synthetic fibers in general and polyacrylonitrile, polyvinyl chloride, and polyamide fibers in particular; arrangement of the fibers in the cross-section of blended yarns), and the reasons for fiber blending. 14 refs.

QUALITY CONTROL IN SPINNING. A. Cross (Chas. Crabtree Ltd). Textile Weekly 58(2): 1411-1416 (Nov. 14, 1958). (16)

The author discusses methods of fault finding and fault elimination in yarn quality control, using as examples count control, moisture regain, length and weight variation, and mixing control. Graphs.

TERLENKA FIBER IN THE SPINNING MILL. F. H. M. A. Klompé. Enka Breda Rayon Rev. 12: 114-121 (Sept. 1958). (17)

The properties of Terlenka which affect spinning and yarn properties are listed, and the processing of Terlenka on the worsted spinning and 3-cylinder system is explained in detail. Tables, graphs, photomicrographs.

PERMO CONDENSER. H. Shenton. Textile Weekly 58(2): 1421-1422 (Nov. 14, 1958). Textile Merc. 139: 703-705 (Nov. 14, 1958). (18)

The operation of the Permo system is described, and some production data are given. The system uses breaker card, Scotch feed, finisher card, and tape condenser. The yarn is spun onto large ring bobbins, and the unit runs continuously.

VALUE OF LOW-FRICTION SURFACES. E. I. du Pont de Nemours & Co. Man-Made Textiles 35: 40-41 (Nov. 1958). (19)

The benefits of using matt-finished metallic surfaces in all stages of yarn processing are pointed out. The degree of improvement depends on the ability of the matt-finishing to reduce the coefficient of friction. Matt-finished machine parts which have contributed to an increase in machine efficiency include: coiler tube gear, sliver guides, flyers, pencil rolls, and various types of tension devices. The techniques for achieving this finish are briefly outlined. Graph, photos, photomicrographs.

CALGON AS ADDITION TO SPINNING OILS. K. Schuster and A. Franck-Meinzolt. Textil-Praxis 13, No. 5: 503-505 (1958). In German. Through BCIRA 38: 632 (1958). (20)

The addition of Calgon to spinning oils has the following advantages: (1) reduced static electrification and, consequently, increased tensile strength and greater regularity of the yarns; (2) increased removeability by washing of the mineral-oil lubricants; (3) elimination of iron traces which might promote catalytically the oxidation of textile oleins; (4) improved storability of the emulsions as a result of the stabilizing properties of Calgon N.

AUTOMATION IN THE WOOL TEXTILE INDUSTRY. L. Bellwood. Wool Rev. 32: 29 (July 1958); 34-35 (Aug. 1958); 37 (Sept. 1958); 35 (Oct. 1958); 31 (Nov. 1958); 33 (Dec. 1958). (21)

Each department in woolen manufacturing is studied to find where integrated processes and further mechanization will make the greatest contribution.

MANMADE FIBER TOW TO TOP: REVIEW OF THE MAIN CONVERSION SYSTEMS. W. Hardacre (Courtaulds Ltd). Textile Merc. 139: 771-776 (Nov. 28, 1958). (22)

Among the systems discussed are the Greenfield, Pacific, and Rieter systems of cutting or shearing, the Nordhorn system of cutting and carding, and the Halle-Seydel and Turbo systems of stretch breaking. Diagrs, photos.

USE OF NOMOGRAMS IN THE SPINNING MILL. P. Bojtar. Textil-Praxis 13, No. 5: 463-465 (1958). In German. Through BCIRA 38: 635 (1958). (23)

The use of nomograms is illustrated by an example of change-wheel calculations (necessary practically for each spinning-plan alteration for cards, drawframes, speedframes, and ring spinning machines).

Opening, picking, fiber preparation B1

MEASURES FOR IMPROVING PICKER LAPS. F. Sutter. Textil-Praxis 13, No. 7: 678-682; No. 8: 778-782 (1958). In German. Through BCIRA 38: 633 (1958). (24)

The examples and advice given for improving the regularity of picker laps are based on tests with the Uster Varimeter in various spinning mills and on data obtained in cooperation with known spinning machinery manufacturers. Reference is also made to the relevant publications.

Carding and combing B2

EXPERIMENTS WITH EUREKA FLATS ON CARDS WITH HOOK AND ALL-STEEL CLOTHING. J. Lunenschloss and H. Güttler. Textil-Praxis 13, No. 6: 557-562 (1958). In German. Through BCIRA 38: 633 (1958). (25)

The Eureka flats, covered with semi-rigid flat-wire clothing with a slightly smaller wire density than that of the normally used hook clothing, were found to give, without impairing the sliver quality, a smaller amount of flat waste, with a distinctly lower proportion of good fibers and, in particular, long fibers. In the experiments described, the flat waste decreased from 2.5-3% in normal flats to about 1.5% in Eureka flats with higher wire density and to 0.5-1% in flats with lower wire density. The economic advantages of the Eureka flats are shown to consist in a saving of 297 kg raw material per card per year, at a card production of 4.5 kg, 2-shift operation, and 4,400 working hours per year.

Drawing and roving B3

HIGH-SPEED PIN DRAFTERS. T. W. Hibbert (Jeremiah Ambler Ltd). Textile Merc. 139: 810-812 (Dec. 5, 1958). (26)

The operation, construction, and advantages of Warner and Swasey high-speed pin drafters are described. Photo.

NEW FINDINGS IN THE FIELD OF FIBER DRAFTING. O. König. Textil-Praxis 13, No. 5: 460-462; No. 6: 551-556 (1958). In German. Through BCIRA 38: 633 (1958). (27)

Causes of the most important drawing faults defined as deviations from the ideal fiber draft (floating fibers, variations in the degree of draft, bulging of the sliver, and migration of the nipping line) are discussed and it is pointed out that the majority of these faults can be remedied by means of the so-called fiber-draft function (function which represents the magnitude of fiber draft in dependence of the position of the fiber head). From the form of this function it is possible to draw conclusions as to the quality of the drawing work performed by the drawframe and the manner in which the drawframe components must be designed, dimensioned, and set to obtain especially favorable drawing conditions.

Spinning, winding, twisting B4

ROLL TESTER AS SPINNING AID. E. Dworschak. Textil-Praxis 13, No. 6: 562-563 (1958). In German. Through BCIRA 38: 635 (1958). (28)

The instrument (produced by K. Zweigle, Reutlingen) is designed to test rapidly, during operation of the machine, the correct running of the top rollers and to show any defects which require polishing. In addition to the measurement of the eccentricity of the rollers, it is also possible to detect, through a light slot, the formation of grooves on the roller surface. The two bulbs, which light up when the device is pressed on to the roller, are fed by a battery fitted in the handle.

AMBLER SUPERDRAFTING SYSTEM: APPLICATION IN WORSTED-TYPE SPINNING. M. Hannah (Leeds Univ.). Textile Weekly 58(2): 1533-1534, 1537-1538 (Nov. 28, 1958). (29)

The author discusses the development of the Ambler superdrafting system, the way it is now used, and properties of the yarn produced. Diagr, photo.

DUO RING SPINNING FRAME. Eisenwerk Hensel. Textile Weekly 58(2): 1467 (Nov. 21, 1958). (30)

The Duo ring frame doubles the number of spindles in the same area. Two rows of offset spindles on each side are arranged in steps at different levels.

SPINNING AND TWISTING METALDIAMANT RINGS. Riv. Tessile 13, No. 6: 637-638 (1958). In Italian. Through BCIRA 38: 634 (1958). (31)

Advantages of these nonoxidizable rings are enumerated, reference being made to self-lubricating types (SAFI and SAFIR) with triangular profile.

DEVICE FOR MOUNTING RING TRAVELERS. W. Oeser. Textil-Praxis 13, No. 5: 454-457 (1958). In German. Through BCIRA 38: 634 (1958). (32)

Economic advantages of the device described (developed by Reiners & Fürst, M. Gladbach) are discussed and proved by calculations. The device is designed for rapid mounting of C-shaped travelers on ring-spinning and ring-twisting machines.

REICHERT SPINDLE MAINTENANCE UNIT. Melliand Textilber. (English ed.) 39, No. 4: 224, 226 (1958). (33)

The Reichert unit is employed for rinsing the spindle housing with oil and filling it with fresh oil. The construction and operation of the unit are described. Photos.

EXAMINATION OF A PNEUMATIC SPINNING SPINDLE DRIVE. W. Frenzel and P. G. Müller. Faserforsch. u. Textiltech. 9, No. 7: 273-285 (1958). In German. Through BCIRA 38: 634 (1958). (34)

The pneumatic spindle drive described is basically a compressed-air, free-jet turbine (Pelton turbine). Although, theoretically, higher speeds can be obtained with such drives than with the usual systems, in the practical spinning process they were found to be to a great extent dependent upon the load and to show low efficiency for normal ring spindles. They may be more suitable and show greater advantages for simple winding processes or for large can spindles.

NEW BALL-SHAPED WASHERS FOR SPINDLES. V. Delmen. Textil-Praxis 13, No. 5: 462-463 (1958). In German. Through BCIRA 38: 634 (1958). (35)

These washers (illustrated) eliminate recentering and readjustment of the spindles and prevent breaking or bending of the spindle box if the spindle rails are not entirely parallel.

Yarns B5

TWISTING DU PONT ZERO TWIST NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Nov. 1958. 7 p. Bull. N-115 (replaces Bull. N-85). Free. (36)

Suggestions for redrawing, downtwisting, and uptwisting are presented.

MODERN TIRE CORD TWISTING PROCESSES. PART 2. M. Michelitsch. Melliand Textilber. (English ed.) 39, No. 4: 226-234 (1958). (37)

A detailed description of the operational principles of 2-for-1 twisting is given, and its application to tire cord cabling described. See abstr. 4065/58 for Part 1. Diagrs, photo.

SAABA TEXTURED YARN IN KNITWEAR: APPLICATIONS AND TECHNIQUES. Can. Textile J. 75: 69-72 (Nov. 14, 1958). (38)

Saaba is a reprocessed Superloft or Fluflon false-twist stretch yarn which is very uniform. Yarn characteristics, knitting recommendations, and the properties of Saaba garments are discussed. Photos.

SPUNLOFT: ADDING BULK AND STRETCH TO A SPUN YARN. V. Castle. Skinner's Silk & Rayon Record 32: 1202-1203 (Nov. 1958). (39)

Spunloft is the registered name for long staple spun yarns which have been given greatly increased powers of bulking. There are several classes of these yarns but in this article only the high-stretch high-bulk type is described. Fiber and fabric properties are described briefly. Photomicrographs.

NEW TEXTURES IN NYLON. D. F. Arthur. Nylon Outlook 1: 4-9 (Autumn 1958). (40)

Bulked nylon yarns of the air-blast type (Taslan), zig-zag crimp type (Ban-Lon), false-twist type, and edge-crimped type (Agilon) are described and possible future developments are discussed. Photos.

CHART FOR DETERMINING YARN REMAINING ON DU PONT ACETATE TRICOT BEAMS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Oct. 1958. 2 p. Bull. A-37 (replaces Bull. A-27). Free. (41)

SORPTION OF HCl BY TEXTILE FIBERS. PART 4. THE EFFECT OF HCl ON SOME PHYSICAL PROPERTIES OF NYLON. P. Larose (Nat. Research Coun., Ottawa). Textile Research J. 28: 980-988 (Dec. 1958). (42)

The contraction of nylon yarn resulting from the sorption of HCl has been studied under various conditions. Tension applied to the yarn during the sorption of the gas reduces the contraction in a way that can be explained by the theory of reaction rates. It is shown that the uptake of HCl, however, is not affected noticeably by tensioning the yarn. The contraction appears to be largely dependent on the rate of diffusion of the HCl. A coefficient of diffusion has been calculated for this rate at 22° C. The effect of drawing has also been investigated, and it was found that the greater the draw ratio, the greater the contraction, but the previous history of the yarn is very important in this respect. Twisted nylon filament has also been observed to untwist during HCl sorption. This untwisting also appears to be a rate process. Diagr, graphs, 4 refs.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

EICHLER USI-B THREE ROLLER BEAMING MACHINE FOR CARPET MILLS. Melliand Textilber. (English ed.) 39, No. 4: 240-244 (1958). (43)

The warping systems used in most carpet weaving mills are summarized, and the suitability of the Eichler beaming machine for the carpet trade is discussed. Diagrs.

DIRECT AND SECTIONAL WARPING MACHINES. J. Schneider. Rayonne et Fibres Synthet. 14, No. 7: 911-925 (1958). In French. Through BCIRA 38: 637 (1958). (44)

Various constructions are reviewed and characteristic features pointed out.

HIGH EFFICIENCY BENNINGER SECTIONAL WARPING MACHINE ZA. A. Bächtold. Melliand Textilber. (English ed.) 39, No. 4: 234-240 (1958). (45)

The main features of the ZA warper are described and illustrated. Photos.

CHOOSING A WARP TYING MACHINE. W. Westbrook. Textile Bull. 84: 56, 59 (Nov. 1958). (46)

Three types of warp tying machines are discussed: the stationary, the wide portable, and the small portable. This article presents some of the factors that must be considered in deciding which type of tying machine is best suited to individual needs.

PREPARATION FOR WEAVING. A. Trunk and W. Ortmann (W. Schlafhorst & Co.). Textile Weekly 58(2): 1345-1350 (Nov. 7, 1958). (47)

The improvements in design in high speed Schlafhorst cone winders which have contributed to higher quality packages with savings in handling time are discussed.

ECONOMICALLY OPTIMUM WARP BEAM DIAMETER. H. Kokerbeck. Textil-Praxis 13, No. 7. 696-701 (1958). In German. Through BCIRA 38: 637 (1958). (48)

It is shown that the warp length considerably affects the costs per output unit. The optimum warp beam diameter is determined by taking into account the investment and interest costs. Technical difficulties that may occur in the case of great warp lengths were not taken into consideration.

MODERN SIZING METHODS FOR COTTON YARNS. H. Abelen. Textil-Praxis 13, No. 7: 694-695 (1958). In German. Through BCIRA 38: 638 (1958). (49)

Reference is made to the use of water-soluble cellulose ethers, particularly Solvitose, and its advantages (stability of the size, softeners of the yarn, increased abrasion resistance, etc.). The higher cost of the size is compensated for by the saving in steam and time, owing to the possibility of increasing the speed of the sizing machine by 20-30%.

THREAD-GUIDING MEANS ON CHEESE WINDING MACHINES. J. Schneider. Textil-Praxis 13, No. 5: 465-471 (1958). In German. Through BCIRA 38: 637 (1958). (50)

Thread-guiding units on cheese winding machines are reviewed, with special reference to the winder, with shaftless split-drum yarn guide.

DEVICE FOR THE CONTINUOUS MEASUREMENT OF TENSION DURING WINDING. J. Hajek. Deut. Textiltech. 8, No. 7: 334-337 (1958). In German. Through BCIRA 38: 637 (1958). (51)

The experimentally-proved fact that continuous measurement of the thread tension by means of a mechanical tensiometer increases the tension by 100%, led to the development of the apparatus described (Czech product), which can be fitted on winding machines in addition to the usual thread brakes. When used correctly, the apparatus leads to increased productivity without the risk of overstretching the thread.

CROON & LUCKE HANK WINDING MACHINE. Croon & Lucke GmbH. Man-Made Textiles 35: 46-47 (Dec. 1958). (52)

The difficulties involved in winding hanks of crimped filament yarns for dyeing are discussed, and the design and performance of the Croon & Lucke machine, which permits the high speed winding of these heavy "muffs," are described. Photos.

KNOTEX WARP TYING MACHINE. Knotex GmbH. Man-Made Textiles 35: 71 (Dec. 1958). (53)

Comparative productivity figures on hand tying and mechanical tying with the Knotex machine are given.

HOW TO CUT SHEDDING LOSSES. H. C. Olsen (Nat. Starch Prods. Inc.). Textile Inds. 122: 79-84 (Dec. 1958). (54)

Laboratory tests can be used to improve the slashing operation and minimize shedding. Three approaches to decreased shedding are discussed: size formulation, size preparation, and size application. Photomicrographs, diagr, graphs.

Weaving C2

IMPORTANCE OF WASTE IN WEAVING. V. Luzet. Rayonne et Fibres Synthet. 14, No. 7: 982-993 (1958). In German. Through BCIRA 38: 638 (1958). (55)

An attempt is made to determine for each treatment (winding, warping, pirn-winding, knotting, weaving) the quantity of waste normally permitted and to compare with these "standards" the wastes actually produced. The latter vary naturally with the types of machines used and the working conditions, but the comparisons are useful in eliminating the causes of excessive waste. The mean value resulting from 12 determinations is proposed as "standard".

REQUIRED RESISTANCE OF WARP THREADS TO ALTERNATING STRESSES. V. N. Vasilchenko. Textil-Praxis 13, No. 5: 478-480 (1958). In German. Tekstil. Prom. 15, No. 12: 33-40 (1955). In Russian. Through BCIRA 38: 638 (1958). (56)

The equation proposed makes it possible to calculate the required limit resistance of warp yarns for any cotton fabric with linen weave, except for fabrics with a cover factor below 60%. The calculated values can be used as a basis for the standardization of the limit strength of warp yarn. The warp tension at the fabric selvage during beating up was calculated for 17 different cotton fabrics with linen weave and the values obtained agreed within $\pm 5\%$ with those obtained experimentally.

TAIRO PICKER TESTING MACHINE. B. B. Joshi. Textile Dig. 18: 20-24 (Jan.-Mar. 1957). (57)

Description of a machine for testing loom picker life expectancy. Photo, diagr, table.

MILL LOOM INSPECTION AND LOOMFIXER GRADING SYSTEM. Textile World 108: 62-63, 136 (Dec. 1958). (58)

SELF-LUBRICATING PICKER SPINDLES. A. Tischler. Melliand Textilber. (English ed.) 39, No. 4: 248, 250 (1958). (59)

The author discusses present progress in the development of pickers which do not require lubrication.

DUROMID BUFFER SPRING FOR UNDERPICK LOOMS. Albert Haag Pickerfabrik. Melliand Textilber. (English ed.) 39, No. 4: 246 (1958). (60)

Incorporated in the Duromid buffer is a spring element, consisting of two plastic leaf springs which are particularly elastic and wear resistant. Photo, graphs.

NARROW FABRIC WEAVING. Textile Weekly 58(2): 1425-1426 (Nov. 14, 1958). (61)

Features and construction of the Sitam BL 3/35 (for light and medium ribbons and webbings) and the Sitam BL 2/60 (for medium and heavy ribbons and webbings) automatic shuttleless looms are briefly described. Photos.

WEAVING COSTS AND COST CONTROL. J. M. Abbott. Textile Weekly 58(2): 1605-1610 (Dec. 5, 1958). (62)

A brief survey of weaving cost control.

PLASTIC SHUTTLE: HOW GOOD IS IT? G. Guggenheim. Textile Bull. 84: 52, 54-55 (Nov. 1958). (63)

Mill experiences with plastic shuttles are analyzed. Correct installation methods are reviewed and explained.

WEAVING TECHNIQUE AND WEAVE TYPES IN LACE CURTAIN WEAVING (BOBBIN-NET). E. Baum. Textil-Praxis 13, No. 5: 472-474; No. 6: 565-569 (1958). In German. Through BCIRA 38: 639 (1958). (64)

MAXBO SHUTTLELESS LOOM. F. C. Livingstone. Textile Bull. 84: 58 (Dec. 1958). (65)

Features, operation, and advantages are discussed briefly.

PRACTICAL ASPECTS IN THE EVALUATION OF AUTOMATIC LOOMS. PART 2. A. Gasser. Textil-Praxis 13, No. 6: 578-582 (1958). In German. Through BCIRA 38: 638 (1958). (66)

Constructional details and mechanism are described of the Rüti-B automatic loom (cone coupling, multiflange coupling, reverse motion, toothed-disc change motion, 4-color magazine and bobbin-clamping device, automatic bobbin change, mechanical weft feeler, spur-wheel adaptor, and hand-wheel with markings for the adjustment of the position of e.g. the tappet nose, etc.). For part 1 see abstr. 4086/58.

JACQUARD MECHANISMS IN CARPET WEAVING. A. Crossland. Textile Recorder 76: 82-84 (Dec. 1958). (67)

The design and application of various types of jacquard machines used in carpet weaving are described. Diagrs, photos.

LOOMFIXER AND HIS JOB. PART 1. W. Westbrook. Textile Bull. 84: 54, 56-57 (Dec. 1958). (68)

The basic fundamentals which a good loomfixer must know are discussed.

DRAPER SHUTTLELESS LOOM. F. M. Fitzgerald. Am. Textile Reptr. 72: 10, 13 (Dec. 18, 1958). (69)

The new Draper shuttleless loom is capable of producing fabric from 36 in. to 64 in. at speeds ranging from about 250 ppm to 200 ppm. Weft carriers are mounted on the ends of flexible steel tapes and work in and out of the shed from opposite sides of the loom in a modification of the rapier principle. Photos.

BROKEN QUILL REDUCTION. Textile Inds. 122: 107 (Dec. 1958). (70)

An improved transfer fork with a foam rubber bumper has been in use on a group of 40 in. Model E looms producing 80 x 92 print cloth 120 hr/week without breaking a single quill.

Knitting C3

WOMEN'S STRETCH HOSE STANDARDS. J. Gift. Textile Inds. 122: 140-141, 145 (Dec. 1958). (71)

The author discusses the standards for stretch hosiery developed by Patentex, Inc., and approved by the Nat. Assoc. of Hosiery Mfrs. He also suggests that these standards (which include the total courses in short, medium, and long sizes, as well as measurements for using a form for testing length and volume) be extended to cover needle width and finishing practices. Tables.

SEAMLESS HOSIERY KNITTING SPEEDS. E. Bridges. Textile Inds. 122: 135-136 (Dec. 1958). (72)

Factors affecting speed and pointers for determining optimum speeds are described.

COUNTS AND GAGES. J. B. Lancashire. Hosiery Trade J. 65: 76-79 (Dec. 1958). (73)

The relationship between the Bradford worsted counts of yarns spun from wools and hairs and the gages of some of the different types of machines that are used for converting these yarns into plain and rib fabrics for underwear and outerwear is discussed. Graphs.

CONTROL OF THE LOOP-FORMING ELEMENTS ON MODERN KNITTING MACHINES. R. W. Mills. Hosiery Times 31: 25, 27-28 (Dec. 1958). (74)

The mechanism used to control the needle bar of a straight bar machine during the knitting cycle is described and illustrated.

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 65: 95-97 (Dec. 1958). (75)

The developments described include: Knom yarn thickness tester; Zwick Densimeter for checking hosiery cone density; and the Aurita automatic 4-color yarn carrier change. Photos, diagr.

WARP KNITTING CALCULATIONS FOR PERCENTAGE COMPOSITION AND YARN LENGTHS. E. Prusa. Hosiery Trade J. 65: 92-93 (Dec. 1958). (76)

RADIOACTIVE ISOTOPES IN THE QUALITY CONTROL OF WARP KNIT FABRICS. H. E. Knobil (Isotope Develops. Ltd). Can. Textile J. 75: 79-81 (Dec. 12, 1958). (77)

The IDL beta gage is used for the continuous indication of fabric weight per unit area during heat setting. Diagr.

FAULT CONTROL ON STITCH-SHAPED GARMENT MACHINES. K. Mamnicki. Hosiery Trade J. 65: 85 (Nov. 1958). (78)

This summary of expected faults and their control in knit fabrics covers the stitch-shaped garment knitting machines.

Fabrics C4

TEXTILES FOR THERMAL EFFICIENCY. Textiles in Ind. 3: 87-88 (Nov./Dec. 1958). (79)

Some uses of textiles in thermal insulation are described.

SURFACE EROSION OF FILLED PLASTICS. S. B. Newman, S. D. Toner, and B. G. Achhammer (U.S. Nat. Bur. Standards). Modern Plastics 36: 135-150, 216-218 (Dec. 1958). (80)

Reinforced plastics were exposed to 50 cycles of washing with a hot detergent solution, rinsing, and drying. The materials studied included glass-fabric laminates prepared with polyester, diallyl phthalate, phenolic, and epoxy resins, and panels molded from phenolic and melamine molding compounds containing both organic and inorganic bulk fillers. In most cases the cyclic wetting and drying resulted in surface erosion that led to crazing, cracking, and surface exposure of the fibrous fillers. An overlay of metallic foil, polyethylene terephthalate film, or gel-resin coating is suggested for increasing the resistance of filled plastics to surface erosion. Photomicrographs, tables, 7 refs.

DEVELOPMENT OF AN OUTER SHELL AND A FUNCTIONAL CLOTHING FABRIC. J. L. Barach and A. S. Tingas. Celanese Corp. of America, Charlotte, N.C. Apr. 1958. 78 p. Order from Office of Technical Services, Washington 25, D.C. $2.00. PB 151 138. (81)

In the course of this program, a large number of experimental fabrics were prepared, dyed, finished, and evaluated. Details of fabric preparation, dyeing and finishing procedures followed, and results obtained are given in this report. Two fabrics were selected as the constructions most closely meeting the requirements: a Dacron/rayon blend for the functional clothing fabric and a Fortisan/cotton combination for the outer shell fabric. In addition, other constructions of interest were developed such as nylon/Verel, nylon/cotton, nylon/rayon, Fortisan/Dacron. Fortisan/Verel combinations and a nylon/rayon intimate fiber blend. Graphs, tables.

CLOTH TERMS AND PARTICULARS: SILK VELVETS AND BROCADES. W. Middlebrook. Textile Mfr. 84: 581-582 (Nov. 1958). (82)

NYLON OVERALLS. F. McKay. Nylon Outlook 1: 23-27 (Autumn 1958). (83)

Cloth constructions, dyeing and finishing methods, making-up processes, and laundering are discussed as a guide to customers interested in the production of nylon overalls. Photos, graph, table.

HOW TO KEEP SECONDS DOWN. C. A. Little. Textile Inds. 122: 74-76 (Dec. 1958). (84)

A set of basic rules for the quill hauler, battery filler, weaver, fixer, and secondhand for avoiding seconds in woven fabrics. Photos.

WOVEN FABRIC STRUCTURE: NOVELTY IN COLOR-AND-WEAVE EFFECTS. D. C. Snowden. Man-Made Textiles 35: 42 (Nov. 1958). (85)

DESIGN IN WOVEN STRUCTURE. PART 70. APPEARANCE OF DOUBLE PLAIN CLOTHS BOUND BY WEFT INTERCHANGE. D. C. Snowden. Wool Rev. 32: 29. 31 (Nov. 1958). (86)

DESIGN IN WOVEN STRUCTURE. PART 71. MODIFIED SHEPHERD CHECK EFFECTS. D. C. Snowden. Wool Rev. 32: 34-35 (Dec. 1958). (87)

NONWOVENS TODAY. PART 2. H. E. Shearer (Am. Viscose Corp.). Modern Textiles Mag. 39: 33-34, 58-61 (Dec. 1958). (88)

The second installment of this review of nonwoven fabrics includes bonding formulations, dyeing and finishing, yarn-faced nonwovens, lists of patents, nonwoven products in use, and suppliers of nonwoven equipment. Diagrs, 15 refs.

NONWOVEN FABRICS. C. E. Coke (Courtaulds (Canada) Ltd). Chem. & Ind. No. 48: 1569-1576 (Nov. 29, 1958). (89)

Nonwoven fabrics are reviewed under the headings: history and growth of the industry, manufacture (web formation, binder types and application), ideal binder system, uses, economic aspects, and future. Diagrs, graph, 17 refs.

TECHNOLOGY OF TUFTING. PART 3. SPINNING SYSTEMS. H. Sneyd and G. Forshaw. Man-Made Textiles 35: 55 (Nov. 1958). (90)

Typical installations for carpet yarns spun on the woolen system and on the flax and jute systems are briefly described.

TECHNOLOGY OF TUFTING. PART 4. SPINNING SYSTEMS (continued). H. Sneyd and G. Forshaw. Man-Made Textiles 35: 58 (Dec. 1958). (91)

The cotton system spinning of tufted carpet yarns is briefly discussed.

PHYSICAL PROPERTIES OF TUFTED CARPETS. C. H. Sturley and W. T. Westhead (Brit. Nylon Spinners Ltd). J. Textile Inst. 49: P538-P553 (Oct. 1958). (92)

Tufted carpets made from viscose rayon, wool, nylon 6.6, and viscose/nylon blends were subjected to laboratory tests and to a user trial as stair carpet. Flattening and loss of resilience of the carpets on cyclic loading and in use were considerably less for the 100% wool and 100% nylon than for the 100% viscose rayon carpet. Blending of nylon with viscose reduced flattening and resulted in greater retention of resilience and a longer wear life. The 100% wool carpet and viscose/nylon carpets containing more than 20% nylon are still in use. A preliminary attempt was made to correlate laboratory test results with behavior in use of the carpets. Tables, photos, graphs, 5 refs.

FIBERS AND CARPETS. H. Palfreeman (Courtaulds (Canada) Ltd). Can. Textile J. 75: 67-68, 71-72 (Nov. 28, 1958). (93)

The properties of both manmade and natural carpet fibers, as related to consumer requirements of durability, resilience, color, cleanability, and economy, are discussed.

ELASTIC NONWOVENS VERSUS WEBBINGS AND FOAMS. M. T. Hoffman. Wool Rev. 32: 41, 43 (Nov. 1958). (94)

BEDFORD CORDS. J. McIsacc. Wool Rev. 32: 33, 35 (Nov. 1958). (95)

FLEXIBLE FABRIC BARGES. Textiles in Ind. 3: 86 (Nov./Dec. 1958). (96)

Flexible barges made from rubber coated nylon are a potentially important industrial use for textiles.

"I WANT TO RETURN IT BECAUSE . . ." G. M. Smith (Sears, Roebuck & Co.). Am. Dyestuff Reptr. 47: P891-P894 (Dec. 15, 1958). (97)

Consumer complaints with wash-and-wear fabrics are discussed under the headings: piece goods, soil retention, chlorine retention, odor, wearing qualities, fabrication, advertising, and good points.

ELECTRONIC METAL DETECTOR FOR METAL-FREE POLISHING FELT. Textile Inds. 122: 108-109 (Dec. 1958). (98)

The installation used by the Am. Felt Co. to detect metal contaminants in sheets of wool and hair polishing felt is described and illustrated. Photos, diagr.

DOES DRYCLEANING WEAR OUT CLOTHES? D. S. Lyle (Nat. Inst. Drycleaning). Am. Dyestuff Reptr. 47: 917-924, 949 (Dec. 29, 1958). (99)

The results of a two-year wear study of 5 men's suits and 4 women's suits to determine what effect drycleaning has on clothes are reported. They show that drycleaning alone does not wear out clothes. The literature on this subject is also reviewed. Photos, tables, 9 refs.

STUDY OF PARACHUTE SEAM DESIGN CRITERIA. PART 1. INVESTIGATION OF THE STRENGTH OF NYLON AND RAYON CLOTH SEAMS. M. J. Coplan and M. G. Bloch. Pioneer Parachute Co., Manchester, Conn., and Fabric Research Labs., Inc., Boston, Mass. June 1956. 116 p. Order from Library of Congress, Photoduplication Service, Washington 25, D.C. Microfilm $6.00, photostat $18.30. PB 134 849. (100)

The strength of parachute canopy seams was determined for a wide range of specification fabrics. The effect of variation in stitch type, thread size, number of rows of stitches, tape reinforcing, and stitches per inch was studied. A mechanistic and semiquantitative interpretation of the factors controlling seam efficiency was developed and it is indicated that certain intrinsic fabric characteristics, in interaction with the seam construction, may be important in determining the ultimate strength yield at this joint. Photos, diagrs, graphs, tables.

STUDY OF PARACHUTE SEAM DESIGN CRITERIA. PART 2. INVESTIGATION OF THE STRENGTH OF NYLON WEBBING JOINTS. C. R. Miller. Pioneer Parachute Co., Manchester, Conn., and Fabric Research Labs., Inc., Boston, Mass. June 1956. 51 p. Order from Library of Congress, Photoduplication Service, Washington 25, D.C. Microfilm $3.60, photostat $9.30. PB 134 850. (101)

The investigation attempts to evaluate the most efficient joint with respect to fabrication techniques, as well as strength considerations. The variables considered were: (1) type of joint; (2) size of thread and sewing needle; (3) pattern of stitching; (4) number of stitches per inch. Diagrs, tables.

BLENDED YARNS AND FABRICS: THEIR PROPERTIES AND USES. G. E. Chadwick (Brit. Cotton Ind. Research Assoc.). Textile Weekly 58(2): 1473-1476, 1504 (Nov. 21, 1958). (102)

The author reports on experiments carried out at the Shirley Institute. Most of the paper is concerned with blends of nylon with Tanguis cotton. The effects of fiber proportions on yarn snarling, packing density, uniformity, and strength, and on fabric stiffness, creasability, wetting, strength, abrasion resistance, pleating, and pilling are discussed. In addition, the properties that other fibers can be expected to give to fabric blends are noted.

MODERN JUTE MANUFACTURING PRACTICE: SACK CUTTING, SEWING, AND PRINTING. S. A. G. Caldwell. Textile Mfr. 84: 543-545 (Nov. 1958). (103)

The extensive range in production and diversity of structure of jute sacks and bags is noted, and the procedures and machinery used in cutting, sewing, and printing them are described in detail. Diagrs, photos.

PERFORMANCE AND WEAR-COST RATIO OF DRAPERY FABRICS FOR DORMITORY ROOMS. M. M. S. Tierney. J. Home Econ. 50: 772-774 (Dec. 1958). (104)

Summary of a study of 30 drapery fabrics to select those which were most sun- and weather-resistant. Tables.

EFFECT OF A SYNTHETIC LUBRICANT AND TWO DIBASIC ACID ESTERS ON CERTAIN USAF FABRICS. C. D. Smith. U.S. Air Force. Air Research & Development Command. Wright Air Development Center, Materials Lab. Wright-Patterson Air Force Base, Dayton, O. Mar. 1954. 19 p. Order from Library of Congress, Photoduplication Service, Washington 25, D.C. Microfilm $2.40, photostat $3.30. PB 134 712. (105)

This investigation was initiated to determine if fabrics employed by the USAF were subject to degradation or deterioration when exposed to the lubricating oil covered by Specification MIL-L-7808 and the acid esters, di-2-ethyl hexyl adipate and di-2-ethyl hexyl sebacate. Tables.

SURFACE RESISTIVITY OF COTTON, WOOL, AND NYLON FABRICS AT DIFFERENT TEMPERATURES AND RELATIVE HUMIDITIES. H. H. Walker (Nat. Bur. of Standards). (Letter to the editor). Textile Research J. 28: 1047 (Dec. 1958). (106)

SIGNIFICANCE OF WOOL FIBER CRIMP. PART 2. STUDY ON THE WOOLEN SYSTEM. J. Menkart and B. Joseph (Textile Research Inst.). Textile Research J. 28: 940-945 (Nov. 1958). (107)

Two Merino wools, differing in crimp content, but otherwise closely matched, were converted into yarn on the woolen system, and a dress fabric made. The properties of the fibers and assemblies were evaluated; the results are in broad agreement with those of a similar worsted study. Taken as a whole, the results show no greater an effect of fiber crimp in the woolen structure than in previously studied worsted charmeen. This finding is contrary to expectation, which was that the more random and looser woolen structure would permit the fiber crimp to manifest itself more clearly. Tables, graphs, 3 refs.

FINISHING AND CHEMICAL PROCESSING D

TECHNICAL MANUAL AND YEARBOOK. v. 34, 1958. Am. Assoc. of Textile Chemists and Colourists, P.O. Box 28, Lowell, Mass. 554 p. $6.50. (108)

AATCC organization, committee reports, test methods, bibliography of 878 references (with subject index), books (1936-1958), dyestuffs and chemical specialties, buyers' guide, membership list.

ALPHABETICAL LIST OF NEW PRODUCTS DEVELOPED SINCE NOVEMBER 1957. Am. Dyestuff Reptr. 47: 819-849 (Dec. 1, 1958). (109)

Products which have been placed on the market or further developed since November 1957 are divided into three sections: (1) coloring materials, (2) chemicals, and (3) equipment. Photos.

PROPERTIES AND APPLICATIONS OF NITRILE RUBBER LATICES. Brit. Geon Ltd. Man-Made Textiles 35: 64, 66 (Dec. 1958). (110)

The properties of the various Hycar rubber latices are described, and typical examples of their applications are given.

RECENT DEVELOPMENTS IN TEXTILE FINISHING PROCESSES. B. C. M. Dorset. Textile Mfr. 84: 572-576 (Nov. 1958). (111)

This survey covers creaseproofing processes for cotton and viscose which eliminate chlorine retention; flameproofing cotton and rayon with resins formed from formaldehyde and an ester of phosphorodiamidic acid (BP 799 606); use of metalizable dyes for Terylene (BP 777 377); dyeing processes for Darlan; bleaching Acrilan with acidified sodium chlorite (BP 797 958); assistants for dyeing polyvinyl chloride fibers with disperse dyes (BP 799 374); and optical whitening agents based on 4:4'-diaminostilbene-2:2'-disulfonic acid containing triazine residues.

Chemical processes D1

CHEMISTRY OF MODERN FINISHING PROCESSES. A. Reichle and E. Dannecker. Rayonne et Fibres Synthet. 14, No. 6: 800-807 (1958). In French. Through BCIRA 38: 644 (1958). (112)

The chemical reactions taking place during fabric finishing are reviewed, reference being made to dimethylol urea, dicyandiamide, melamine, ethylene urea, urethane, acrylic and methacrylic acid, styrene, butadiene, polyamide, fatty acid, fatty alcohol and fatty amide oxyethylation products, quaternary ammonium compounds, phosphoric acid esters, morpholine derivatives, and silicones.

BRITISH TEXTILE CHEMICALS. PARTS 2, 3, AND 4. Skinner's Silk & Rayon Record 32: 1113-1114 (Oct. 1958); 1223-1224 (Nov. 1958); 1333-1334 (Dec. 1958). (113)

Alphabetical list of British textile chemicals which have appeared on the market in the past year.

SYNTHETIC RESINS IN TEXTILE FINISHING. E. Pieper. Rayonne et Fibres Synthet. 14, No. 6: 785-800 (1958). In French. Through BCIRA 38: 644 (1958). (114)

In this review, the author discusses the application range of synthetic resins and special problems relating to laboratory control (molecular size determination of the precondensate, resin distribution and its quantitative determination, formaldehyde determination, crease recovery of fabrics subjected to wet creaseproofing treatment, dynamometric resistance and elongation at break, and wear resistance determination). 32 refs.

USE OF FELTS IN FINISHING KNITGOODS. M. Molt. Melliand Textilber. (English ed.) 39, No. 4: 252, 254 (1958). (115)

The various finishing processes in which felts are employed and the importance of felt properties on the final quality of the knitgoods are discussed.

DELUSTERING ACETATE FIBER, YARNS, AND FABRICS. Textile Mfr. 84: 557 (Nov. 1958). (116)

A new method for delustering acetate goods (BP 793 697) consists of heating in a soap liquor to which hydrogen peroxide has been added.

IMPORTANCE OF CHLORALKYLAMINES FOR THE CHEMISTRY OF AMINOPLASTS AND OTHER NITROGEN-CONTAINING FORMALDEHYDE CONDENSATION PRODUCTS. PART 1. R. Allscher. Textil-Praxis 13, No. 5: 505-508 (1958). In German. Through BCIRA 38: 645 (1958). (117)

The investigation was carried out by using, in addition to the known analytical methods for determining the organically-bound chlorine and chloride ions, an o-toluidine solution for the determination of chlorine in the rinsing waters. The results reported concern the behavior of well-defined condensates, the preparation of which is accurately described in the literature cited, and which were treated with hypochlorite to study the formation of chloramine. 9 refs.

RAPID METHOD FOR DETERMINATION OF THE DEGREE OF CURING OF COTTON FABRICS FINISHED WITH REACTANT RESINS. Chemische Fabrik Pfersee GmbH. Melliand Textilber. (English ed.) 39, No. 4: 284, 286 (1958). (118)

The iodine-potassium iodide test described tests the degree of curing in fabrics finished with dimethylol ethylene urea resins. This test is suitable for white goods only.

CHELATING AGENTS IN RESIN FINISHING. AATCC. Rhode Island Sect. Am. Dyestuff Reptr. 47: P797-P801 (Nov. 17, 1958). (119)

This study shows that the addition of organic chelating agents to the resin-finishing bath has a beneficial effect upon some of the physical properties of resin-treated fabrics. It was found that the effects in resin finishing varied with the chelating agent and the type of resin used. In many cases, increases in tensile and tear strength and a reduction in damage due to chlorine retention after several washings were observed. Photo, tables, 14 refs.

FINISHING OF BLENDED FABRICS CONTAINING WOOL WITH SPECIAL REFERENCE TO DIMENSIONAL CHANGES. C. S. Whewell, D. C. Snowden, and C. Brookes (Leeds Univ.). J. Textile Inst. 49: P565-P579 (Oct. 1958). (120)

This paper describes experiments carried out on the finishing of fabrics containing coarse wool, fabrics containing wool and two manmade fibers, and fabrics containing wool blended with recently developed manmade fibers. Dimensional changes occurring during finishing blended fabrics are affected by many factors, but the severity of any wet treatment determines the actual shrinkage which takes place. Tables, graphs, 5 refs.

ATTEMPTS TO INTRODUCE AMIDE CROSS-LINKS INTO WOOL. J. A. Maclaren (Wool Textile Research Labs., CSIRO, Australia). Textile Research J. 28: 946-948 (Nov. 1958). (121)

Peptide-forming reagents were applied to wool in an attempt to convert "salt links" into amide cross-links. Wool which has been modified with biscyclohexyl carbodi-imide is almost unchanged in weight, handle, and appearance but has increased resistance to attack by alkali, alkaline thioglycollate, urea-bisulfite, and trypsin. The mechanism of the changes involved is not known. Tables. (For part 2 see abstr. 192/59).

HANK YARN MERCERIZING MACHINE. R. Hünlich. Melliand Textilber. (English ed.) 39, No. 4: 268, 270 (1958). (122)

This automatic machine operates hydraulically and requires no weights for stretching the yarn. Photo.

PEROXIDE BLEACHING OF COTTON ACCORDING TO THE HIGH TEMPERATURE PROCESS. A. Billing. SVF Fachorgan Textilveredlung 13, No. 7: 441-442 (1958). In German. Through BCIRA 38: 641 (1958). (123)

The high temperature peroxide bleaching method, applicable to the treatment of loose cotton, card slivers, hank yarn, cheeses, warp beams, and light cotton fabrics (e.g. bandaging material), is described, reference being made to the equipment, bleaching bath composition, and the use of stabilizers.

RECLAMATION OF FIBERS FROM RAGS. PART 3. ACTION OF HYDRAZINE ON TERYLENE. A. Filson and J. B. Speakman (Leeds Univ.). J. Soc. Dyers Colourists 74: 762-765 (Nov. 1958). (124)

Since it has been shown that butanol solutions of hydrazine can be used to recover wool from mixtures of wool and Terylene, further experiments were carried out with solutions of hydrazine in other solvents. The most rapid destruction of Terylene is brought about by solutions of hydrazine in less reactive solvents, such as toluene and isoamyl benzyl ether. Such solutions have the additional merit of discriminating sharply between wool and Terylene, thus allowing the former to be recovered from mixtures for reuse. Graphs, tables, 2 refs.

SCOURING OF WOOL/TERYLENE MIXTURE CLOTHS. R. S. Hartley and F. F. Elsworth (Wool Inds. Research Assoc.). J. Textile Inst. 49: P554-P564 (Oct. 1958). (125)

Laboratory scouring experiments and microscopic observations of oiled fibers in detergent solutions show that the combing oils at present used in the worsted industry, although readily removable from wool and many other fibers by simple scouring methods, are much less readily removable from Terylene polyester fiber. It has also been shown that combing oils are more readily removed from Terylene as their state of oxidation advances, e.g. as the result of exposure to light. Modification of combing oils by the incorporation of surface active agents facilitates their removal from Terylene. Tables, graphs.

CHLORINATION OF WOOL ON CHEESES. M. Vescia (B. Thies). Melliand Textilber. (English ed.) 39, No. 4: 264-268 (1958). (126)

Tests on the chlorination of wool in the Thies package dyeing machine to make it shrinkproof are reported.

CREASE-RESISTING COTTON. J. T. Marsh. Textile Mfr. 84: 577-580 (Nov. 1958). (127)

On the basis of published literature, the author discusses the effects of resin type, resin concentration, catalyst, curing temperature, softening and stiffening agents, and cloth construction on the relationship between tensile strength and crease recovery. Graphs, 9 refs.

AFTERMERCERIZATION OF WRINKLE-RESISTANT COTTONS FOR IMPROVED STRENGTH AND ABRASION RESISTANCE. R. M. Reinhardt, R. M. H. Kullman, H. B. Moore, and J. D. Reid (So. Reg. Research Lab.). Am. Dyestuff Reptr. 47: P758-P764 (Nov. 3, 1958). (128)

This continuation of a study of the aftermercerization of wrinkle-resistant cotton fabrics shows that the after-treatment will effectively improve the tearing strength and abrasion resistance of fabrics treated with a number of finishing agents. These improvements are achieved with a small loss of wrinkle recovery. However, the gains in tearing strength and abrasion resistance, which are durable to laundering, appear to outweigh the loss of wrinkle resistance. The only finishes adversely affected by aftermercerization were those which are particularly subject to alkaline hydrolysis. Graphs, tables, 24 refs.

UNPLEASANT ODORS FROM CREASE-RESIST FINISHING. J. T. Marsh. Textile Recorder 76: 85-86 (Dec. 1958). (129)

The causes of the formation of methylamine, dimethylamine, and trimethylamine, which can cause unpleasant odors in fabrics after crease resist finishing, and methods by which these odors can be avoided are discussed. The best safeguard is a thorough wash after the final condensation of the resin.

PREFINISHING MEASURES AND PROPERTIES OF REGENERATED AND NATIVE CELLULOSE FABRICS. H. M. Ulrich. Textil-Praxis 13, No. 5: 499-503 (1958). In German. Through BCIRA 38: 644 (1958). (130)

Conditions for obtaining the best creaseproofing effect in cellulosic fabrics (suitable fabric structure, cleanliness of the fabric, tensionless drying, absence of latent creases, high and uniform swellability, good wettability, uniform moisture content of the dry material, dyeing and raising to be carried out before the resin-finish) are discussed and several possibilities are suggested for increasing the absorption of the resin-precondensate solution, e.g. chemical modification of the cotton, treatment with swelling agents, and mercerization of the fabric. 13 refs.

PROBLEM OF PENETRABILITY OF RESIN PRECONDENSATES INTO CELLULOSE FABRICS. R. Loss. SVF Fachorgan Textilveredlung 13, No. 7: 429-431 (1958). In German. Through BCIRA 38: 645 (1958). (131)

An attempt is made to establish a relationship between the absorption height of the solution and its viscosity, the absorption height in cellulose being taken as a practical measure of the penetrability of solutions into the fiber micelles. The experiments, carried out on 7 different resin precondensates, showed that, for reliable and reproducible creaseproofing, control of the viscosity or absorption characteristics of the precondensates is essential in addition to constant squeezing, drying, and condensation conditions.

ACRYLICS IN TEXTILE BINDING APPLICATIONS. A. C. Nuessle, C. E. Hoey, and J. Kucsan (Rohm & Haas Co.). Am. Dyestuff Reptr. 47: P765-P771 (Nov. 3, 1958). (132)

Backcoating, pigment binding, and bonding of nonwovens are discussed. Tables, 9 refs.

ROTPROOFING OF COTTON WITH PENTACHLOROPHENOL AND LAURYLPENTACHLOROPHENOL. H. J. Hueck and J. La Brijn. Tex 17, No. 8: 1057-1062 (1958). In Dutch. Through BCIRA 38: 645 (1958). (133)

Heavy cotton fabric was impregnated with sodium pentachlorophenolate (PCP) and with laurylpentachlorophenol (LPCP) according to practical recipes and tested for rot resistance by means of a soil burial test for 14 days after leaching. Both fungicides gave good results of concentrations of 0.5-2.0%. Water repellent treatment appears to improve substantially the rotfastness obtained with LPCP and to increase the resistance to leaching of PCP and LPCP. Scouring of the cotton fabric before impregnation favorably affects the uniformity of the treatment.

DEVELOPMENT OF SPECIFICATION REQUIREMENTS FOR MILDEW RESISTANT COTTON FIRE HOSE. J. A. Miller and L. O. Lusson. U.S. Naval Shipyard, Philadelphia, Pa. Industrial Test Lab. Dec. 1956. 22 p. Order from Library of Congress, Photoduplication Service, Washington 25, D.C. Microfilm $2.70, photostat $4.80. PB 133 229. (134)

An evaluation was made of samples of 11 commercially-available proprietary rotproofed cotton fire hose. The evaluation was based on the efficacy of each treatment in retarding fungus attack and the effect of the treating compound on the physical properties of the rubber lining. Eight supplementary compounds were used in fungusproofing as many samples of fire hose specifically fabricated and treated for this investigation. Recommendations include specification requirements and test procedures for fungus-resistant cotton fire hose, commercial sources for such hose, and satisfactory fungicidal compounds. Tables.

EVALUATION OF FUNGICIDAL TREATMENTS FOR COTTON FABRICS. J. J. Moder and C. W. Stuckey. Georgia Inst. of Technol. State Eng. Experiment Station, Atlanta, Ga. Apr. 1958. 119 p. Order from Office of Technical Services, Washington 25, D.C. $2.50. PB 151 142. (135)

Separate rolls of cotton sateen fabric were treated with 7 different fungicidal formulations, each formulation being applied at 3 concentration levels, both with or without water repellents. Six of the fungicide formulations contained copper 8-quinolinolate and one contained dehydroabietyl ammonium pentachlorophenate. Twelve months of indoor shelf storage produced a negligible strength loss both before and after agar plate exposure for all fungicides. The pattern of strength loss resulting from outdoor exposure varied among the test sites because of difference in the physical environment. A single linear equation, applicable to all test sites, was derived relating the strength retention to langleys of actinic exposure and relative humidity. Fabrics treated with dehydroabietyl ammonium pentachlorophenate consistently had the lowest breaking strength after outdoor exposure at all sites. Photos, diagrs, graphs, tables.

CREASE RESISTANCE COMPLEX. F. Wood. Man-Made Textiles 35: 69-70, 72 (Nov. 1958). (136)

This brief review of the development of creaseproofing finishes includes a description of the properties achieved through creaseproofing, laboratory testing, and factors involved in processing.

A BRIEF LOOK AT WASH-WEAR FINISHING. A. C. Nuessle (Rohm & Haas Co.). Am. Dyestuff Reptr. 47: P885-P887 (Dec. 15, 1958). (137)

Summary of the present status of wash-and-wear finishing under the headings: introduction, the fabric, creaseproofing agents, effect on fabric properties, adjuncts to the wash-wear finish, other variables.

EASY-CARE FABRICS: TECHNOLOGICAL AND RESEARCH ASPECTS. A. R. Urquhart (Brit. Cotton Ind. Research Assoc.). Textile Weekly 58(2): 1612, 1615-1616 (Dec. 5, 1958). (138)

A general discussion of the combined effects of fiber characteristics, resin finishing, and fabric structure on achieving crease resistance.

PROTECT WOOL IN PROCESS. H. Laudani, G. O. Langlais, and F. E. White. Textile Inds. 122: 69-71, 119, 123 (Dec. 1958). (139)

Application of EQ-53, a DDT emulsion, during scouring protects wool in process from insect damage (black carpet beetle larvae) for less than 1/4¢ per lb. The authors describe laboratory, pilot plant, and mill tests of EQ-53 and tell how it can be used on a production basis. Tables, 7 refs.

Dyeing and printing D2

USE OF WATER-SOLUBLE SULFUR DYES. J. Müller. Textil-Praxis 13, No. 6: 613-616; No. 7: 731-735 (1958). In German. Through BCIRA 38: 642 (1958). (140)

The development of sulfur dyes is briefly reviewed and special reference is made to the Immedial hydrosol dyes (Cassella Farbwerke) and the Thional M dyes (ICI), in which the nonreduced sulfur dye is converted into the water-soluble compound which has practically no affinity and, by means of alkaline reducing agents, can be easily reconverted into the original dye and its leuco compound. These dyes can be advantageously used in continuous and discontinuous piece-dyeing, yarn-package dyeing, etc., and can be applied to polyamide and polyester fibers and their mixtures with cellulosic fibers.

REDUCTION TIMES OF CIBANONE DYES. P. Ulrich and F. Pfenninger. SVF Fachorgan Textilveredlung 13, No. 7: 423-429 (1958). In German. Through BCIRA 38: 642 (1958). (141)

Experiments were carried out to determine the reduction rate of Cibanone dyes in powder, micropowder for dyeing, and microdisperse form. The experimental conditions are described and the reduction times of the different commercial forms of Cibanone dyes are listed in a table.

DYEING: THEORY AND PRACTICE. PART 4. W. Postman (Ga. Inst. of Technol.). Dyestuffs 42: 282-289 (Dec. 1958). (142)

The dyeing of nylon (acid and disperse acetate dyes) and cellulose acetate (acetate dyes) is briefly reviewed, as well as techniques for dyeing other synthetic fibers (azoic, high temperature, carrier, cuprous ion) and the application of basic dyes to Orlon. 14 refs.

SOME FEATURES OF REMAZOL DYESTUFFS. H. Zimmermann (Farbwerke Hoechst AG). Melliand Textilber. (English ed.) 39, No. 4: 262 (1958). (143)

The Remazol dyes, like the Procion and Cibacron, are reactive dyes. Their properties and advantages are noted briefly.

REMAZOL COLORS: A CHEMICALLY NEW SYSTEM OF FIBER-REACTIVE DYESTUFFS. E. P. Sommer (Hoechst Chem. Corp.). Am. Dyestuff Reptr. 47: P895-P899 (Dec. 15, 1958). (144)

A new chemical system of fiber-reactive dyes is discussed. Differences between the Remazols and other fiber-reactive dyes are explained. Different dyeing methods are described, especially for continuous dyeing either by the pad-steaming method or curing method. Printing methods of all kinds are discussed in detail, showing the possibilities of new styles. 12 refs.

IDENTIFICATION OF DYESTUFF CLASSES. PART 1. D. A. Shiraef (Gen. Aniline & Film Corp.). Fibres 19: 354-356 (Nov./Dec. 1958). (145)

The system described is based upon the reactive qualities of dyes, which are classified by their action with certain reagents. A category may include some vat dyes, certain sulfur dyes, or aniline blacks, grouped together because all reduce and oxidize under certain controlled conditions. In this way the comparing of samples for similarities is eliminated: dyes are recognized not by establishing what they could be, but by ruling out what they could not be.

CENTURY OF PROGRESS IN THE SYNTHESIS OF DYES FOR PHOTOGRAPHY. L. G. S. Brooker and P. W. Vittum (Eastman Kodak Co.). J. Soc. Dyers Colourists 74: 765-767 (Nov. 1958). (146)

COLOR IN WRITING AND COPYING. J. P. Gill (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 74: 739-745 (Nov. 1958). (147)

A general summary of types of dyes and pigments used in inks (other than printing inks), pencils, typewriter ribbons, and carbon papers. An account of the properties necessary for the different applications is given, together with some particulars of the method of manufacture and use of typewriter ribbons and carbon papers, both for normal typing purposes and for spirit duplicating. 13 refs.

NEW DYES FOR NEW FIBERS. J. L. Waldo (Allied Chem. Corp.). Dyestuffs 42: 269-274 (Dec. 1958). (148)

National Lanamid and Nabor dyes and their application to polyamide and acrylic fibers are discussed.

PRACTICALITY OF DYEING BLENDS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Dec. 1958. 4 p. Bull. X-94. Free. (149)

A survey of the types of dyeing that can and cannot be applied to blend yarns and fabrics containing du Pont fibers. Discusses union-dyeing, cross-dyeing, and techniques where one blend component is reserved while the other is dyed.

PRACTICAL PROBLEMS IN FINISHING WOVEN AND KNITTED FABRICS FROM POLYESTER FIBERS. H. Stern and H. U. Schmidlin. Textil-Praxis 13, No. 6: 617-622; No. 7: 726-731 (1958). In German. Through BCIRA 38: 643 (1958). (150)

Laboratory and practical findings during pretreatment, dyeing, and finishing of polyester fabrics and polyester-blend fabrics are reviewed and suitable dyeing compositions are given, together with directions for their application.

PRINT WORKS AND DYEHOUSE ORGANIZATION. W. R. Tornquist (Magog Print Works). Can. Textile J. 75: 63-66 (Nov. 28, 1958). (151)

The author discusses the requirements for the physical setup of a dyehouse and print works organization, including work flow, equipment selection, quality control, personnel, and costs.

CONTINUOUS DYEING OF WOOL WITH MILLING ACID DYES. D. R. Lemin (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 74: 746-756 (Nov. 1958). (152)

Loose wool may be successfully dyed continuously with milling acid dyes in very short times at 100° C in normal scouring machines, thus eliminating normal dyeing machinery. The method is restricted commercially to pale and medium depths. A pad steam method has been developed for dyeing wool pile fabrics continuously. It has been found that it is not possible to dye wool piece goods satisfactorily by continuous pad steam methods, owing to the hydrophobic character of the wool and the difficulty of eliminating skitteriness from the dyeings. Tables, graphs, diagr, 10 refs.

DYEING OF CELLULOSE: THEORY AND THE DYER. J. Boulton (Courtaulds Ltd). Textile Research J. 28: 1022-1030 (Dec. 1958). (153)

The general theory of cellulose dyeing, the influences of variables in practical dyeing, and the present theoretical outlook are discussed.

FACTORS INFLUENCING THE DYEING OF ACETATE FIBERS WITH DISPERSE NONIONIC DYES. F. Fortess and V. S. Salvin (Celanese Corp.). Textile Research J. 28: 1009-1021 (Dec. 1958). (154)

This description of the factors affecting the dyeing of acetate fibers with the disperse dye class includes: (1) a detailed description of the dyes in terms of their chemical and physical properties and their behavior in the aqueous and fiber phases; (2) the influence of the degree of acetylation of the cellulose upon the dyeing rate and affinity for the disperse dyes; (3) the relationship of specific dye structure to dyeability and colorfastness on secondary and tricellulose acetate; and (4) a discussion of the mechanism of accelerant or carrier dyeing as applied to cellulose triacetate. Tables, graphs, 13 refs.

SHIRLEY FLASH STEAMER. Sir James Farmer Norton & Co. Ltd. Textile Merc. 139: 702, 709 (Nov. 14, 1958). (155)

This multicylinder flash steamer developed at the Shirley Institute is principally intended for the Colloresine process. Steaming time is reduced and "marking off" eliminated. Photo.

FLEISSNER CONTINUOUS DYEING AND DRYING RANGE FOR LOOSE STOCK AND PIECE GOODS. H. Steglich. Melliand Textilber. (English ed.) 39, No. 4: 270, 272 (1958). (156)

The operation of the machines is described. Photo, diagr.

CARRIER-ASSISTED DYEING OF HYDROPHILIC FIBERS. AATCC. Del. Valley Sect. Am. Dyestuff Reptr. 47: P789-P795 (Nov. 17, 1958). (157)

The action of carriers on wool (and on fibers generally) is explained by a mechanism involving the absorption of the carrier by the fiber. This absorbed carrier makes the fiber more permeable to the diffusion of dye, and therefore increases the dyeing rate. The most widely favored alternate mechanism, the solvent layer theory, is shown to be untenable on theoretical grounds. This conclusion is verified experimentally. The importance of this generalized view of carrier dyeing is indicated and some potentially useful applications of this phenomenon are suggested. Graphs, tables, 14 refs.

DYEING THEORY: RETROSPECT AND PROSPECT. S. M. Neale (Coll. of Science & Technol., Manchester). Textile Research J. 28: 1041-1044 (Dec. 1958). (158)

The physicochemical approach to the understanding and elucidation of a phenomenon proceeds in three stages. The first stage consists of the collection of reasonably accurate quantitative data. In the second stage qualitative or rough quantitative explanations of the observed trends are put forward, and in the final stage the whole phenomenon is made amenable to precise treatment in mathematical terms. The development of dyeing theory passed fairly rapidly through the first and second stages during the 1930's and is now struggling to enter the third stage. 25 refs.

EFFECT OF THICKENING AGENTS DURING PADDING WITH ULTRADISPERSE VAT DYES. R. Kern. Textil-Praxis 13, No. 6: 589-595 (1958). In German. Through BCIRA 38: 644 (1958). (159)

An attempt is made to prevent dye migration, occurring during intermediate drying of cotton fabrics dyed with pigment dyes, by the addition of thickening agents to the padding bath. The suitability of these agents (sodium alginate, tragacanth, Meyprogum, carboxymethylcellulose, Colloresin, etc.) and their effect on dye dispersion and on the dyeing process are examined, using ultradisperse vat dyes. Directions are also given for padding with direct and disperse dyes.

LABORATORY STUDY OF PACKAGE DYEING. P. Woerner, F. Fordemwalt, and E. Allen (Am. Cyanamid Co.). Textile Research J. 28: 1031-1041 (Dec. 1958). (160)

The effect of several variables on levelness of package dyeing with vat dyes was studied. The effects of the particle size of the pigment dispersion, of retarders and solvents, temperature variation, and the use of vat acids were determined, as well as the relationship between levelness of dyeing and the affinity of the dye for the fiber (in the thermodynamic sense). A migration test for vat dyes, whereby a dyed and undyed skein are placed in a caustic-hydro solution and allowed to reach equilibrium, was found to give a good indication of the dye's leveling ability. Tables, graphs, 9 refs.

CONTINUOUS DYEING WITH ANTHRASOL DYES. G. Strohbach. Deut. Textiltech. 8, No. 7: 356-361 (1958). In German. Through BCIRA 38: 642 (1958). (161)

Continuous dyeing with Anthrasol dyes on piece goods from vegetable fibers is discussed, with reference to practical experiences, and the equipment of the continuous dyeing installations which make it possible to obtain dyeings with excellent levelness and dye penetration.

PROBLEMS OF RIBBON DYEING. H. Renziehausen. Textil-Praxis 13, No. 7: 720-723 (1958). In German. Through BCIRA 38: 643 (1958). (162)

Three methods for continuous dyeing of ribbons are critically examined: (1) padding on the padder and rinsing; (2) padding, salt-bath fixing, rinsing, aftertreatment; (3) padding, steaming, salt-bath afterfixing, rinsing, aftertreatment.

FIBER DAMAGE IN THE STOCK-DYEING OF WOOL. B. Gullbrandson (Swedish Inst. for Textile Research). Textile Research J. 28: 965-968 (Nov. 1958). (163)

The tenacity of wool is often reduced in stock-dyeing processes. As a result, many fibers are broken in the card. This reduction in tenacity has usually been ascribed to a damaging effect of the dye. However, these investigations show that most of the reduction in fiber strength is due to setting of bends or curvatures of the packed fibers by the hot water treatment. Such set fiber bends are nonuniformly strained by tensions and thus resist smaller loads than fibers set in the straight state. Graph, diagr, 15 refs.

EFFECT OF THERMAL TREATMENTS ON THE DYEABILITY OF THERMOPLASTIC YARNS. Am. Dyestuff Reptr. 47: P853-P862 (Dec. 1, 1958). (164)

Acrylic, polyamide 6, polyamide 66, polyester, and triacetate fibers were given thermal treatments prior to dyeing. These treatments involved variations in temperature, tension, and moisture. It was found that changes were produced in the molecular orientation and crystallinity which caused changes in the fiber dyeability. It was concluded that variations in commercial thermal treatments prior to dyeing are a major cause of shade variations. Diagrs, graphs, tables, 25 refs.

WATER: LIFEBLOOD OF THE DYEHOUSE. W. C. Dodson. Textile Bull. 84: 60-65 (Nov. 1958). (165)

The author discusses sources of water contamination and describes methods of filtration, water treatment, and softening.

EXAMINATION OF PRINTS AND PRINTING PASTES. K. Schmidt. Textil-Praxis 13, No. 6: 609-613; No. 7: 716-720 (1958). In German. Through BCIRA 38: 643 (1958). (166)

Physical methods for determining the consistency (viscosity), surface activity, ductility, homogeneity, and printability of printing pastes, the uniformity of a printed surface, and the color depth of prints are reviewed and their use in evaluating printing pastes as well as controlling the printing process is discussed. Special reference is made to the effect of Calgon and its advantages in printing.

HYDROSULFITE/SODIUM HYDROXIDE METHOD FOR DEVELOPING VAT PRINTS AND VAT PADDING. E. Fees. Textil-Praxis 13, No. 7: 724-726 (1958). In German. Through BCIRA 38: 644 (1958). (167)

The installation developed for this process (Bentelер-Werke AG) is described and dyeing problems arising from the use of the steamer during development of vat prints, desizing, bleaching, and dyeing with substantive, Indanthrene, sulfur, and Anthrasol dyes are discussed.

APPLICATION OF DYE IN THE WARP DIRECTION DURING SCREEN PRINTING. R. Künzl. Textil-Praxis 13, No. 7: 723-724 (1958). In German. Through BCIRA 38: 644 (1958). (168)

It is shown that, from the point of view of productivity, the only correct way of applying the dye during screen printing is in the warp direction. Since the doctors for applying the dye in the warp direction are very long, they must be treated with special care; however, only 2 sets are necessary (one for wide and one for narrow cloth), whereas for dye application in the weft direction, each variation in the stencil size requires a corresponding doctor set.

RECENT HISTORY IN TEXTILE PRINTING. P. J. Wood (Royce Chem. Co.). Am. Dyestuff Reptr. 47: 755-756 (Nov. 3, 1958). (169)

Mechanical processes D3

FLOATING ROLLER AS NEW ELEMENT FOR ROLLER MACHINES. E. Küsters. Melliand Textilber. (English ed.) 39, No. 4: 254, 258-260 (1958). (170)

After extensive development work it was possible to construct roller machines (padders, calenders, etc.) which operate with non-sagging rollers having a relatively very small diameter. The "floating roller" constructed for this purpose consists essentially of two elements: a steel-tube cylinder polished on the inside and a stationary cross-piece, about which the steel-tube cylinder revolves, and whose diameter is by several millimeters smaller than that of the cylinder. The annular cross-section thus formed is subdivided into two chambers by two opposite sealing bars extending over the whole length of the cross-piece. One of the two chambers is provided with hydraulic pressure so as to apply uniform pressure over the whole length of the tube cylinder. Diagrs.

PRESSING AND PLEATING FABRICS CONTAINING TERLENKA. H. Cuypers and A. Visser. Enka Breda Rayon Rev. 12: 122-128 (Sept. 1958). (171)

Methods of pleating and conditions for obtaining permanent pleats or creases in Terlenka blends are discussed. Photos, diagrs.

OIL FOG LUBRICATING SYSTEM. Textile Inds. 122: 115 (Dec. 1958). (172)

The operation of and benefits derived from a lubrication system employing compressed air to spray oil in "fog" form on the chain and tracks of a tenter frame are described.

KETTLING & BRAUN NON-STOP CARD RAISING MACHINE. J. Ernestus. Melliand Textilber. (English ed.) 39, No. 4: 278-284 (1958). (173)

Features, operation, and production data are given. Photos, diagr, graphs, tables.

ROTARY PRESS. H. Herkenrath. Melliand Textilber. (English ed.) 39, No. 4: 274, 276 (1958). (174)

The major requirements of a rotary press are summarized. Diagr, photo.

Drying, setting, conditioning D4

CONVECTION AIR APPLICATION TO TEXTILE DRYING. W. L. Metcalfe. Textile Bull. 84: 60-82 (Dec. 1958). (175)

The factors determining an air impingement pattern, as used in convection drying to achieve maximum coverage, are discussed.

TESTING AND MEASUREMENT E

STAINING TECHNIQUE UTILIZES TWO-DYE SOLUTION. R. M. Smith (Johnson & Johnson). (Letter to the editor). Textile Research J. 28: 1049-1051 (Dec. 1958). (176)

A fast and simple method for staining and permanently mounting cross-sections. The same two dyes are always used (water solution of methylene blue and an alcohol solution of Sudan III) and the dye solutions act as the mounting medium. The method is primarily useful for determining the location of known materials in the section but may also be used to help identify unknown components. Tables, photomicrograph.

POTENTIAL USES OF THE DIELECTRIC CONSTANT MEASUREMENT IN THE TEXTILE LABORATORY. W. Döcke. Deut. Textiltech. 8, No. 8: 406-409 (1958). In German. Through BCIRA 38: 647 (1958). (177)

The principles and special suitability of the dielectric-constant measurement for quantitative determinations (water-content determination in textiles, residual-fat determination, etc.) are discussed and the measuring device used for this purpose is described.

MOMENTS OF DISTRIBUTIONS AND THEIR INTERRELATION. J. C. Whitwell and J. H. Wakelin (Textile Research Inst.). Textile Research J. 28: 929-940 (Nov. 1958). (178)

The purpose of this paper is to summarize the relationships between the first few moments of several of the more common types of distributions and to point out a few applications in the analysis of data. Specific problems include: (1) related distributions, particularly those related by a power of the variable, as with number vs length-biased distributions; and (2) several problems regarding the sampling of mixed distributions. The latter deal with samples from the strata which will comprise the blend or from the blend itself. In each of these situations the effect of single and of bulk samples is treated separately. Finally, some methods of establishing the forms of the distribution are noted. 8 refs.

Fibers E1

EFFECTS OF TEMPERATURE AND AIR HUMIDITY ON THE MICRONAIRE AND PRESSLEY TESTS. G. Dewischeit. Textil-Praxis 13, No. 7: 674-675 (1958). In German. Through BCIRA 38: 649 (1958). (179)

It is shown that in order to obtain reproducible and comparable results, it is essential to maintain the specified standard temperature and humidity conditions in the testing room and to expose the cotton to be tested for a sufficiently long time to these conditions. The Pressley values are mainly affected by humidity changes (other factors, such as cohesion, structure, or staple length play no decisive role), while results from the micronaire tester depend also upon the presence of impurities (stem and husk particles) and the thickness of the fiber (higher values in the case of coarse fibers).

TEXTILE MICROTOMY. C. Jacobsen. Tidsskr. f. Textiltek. 16, No. 7-8: 119-122 (1958). In Danish. Through BCIRA 38: 647 (1958). (180)

The preparation of fiber cross-sections for microscopic examination is described, with reference to the choice of mounting medium, apparatus, and procedure for cross-section analysis. Photomicrographs are given of cotton and viscose rayon fiber cross-sections.

PROGRESS REPORT ON THE INTERNATIONAL COTTON CALIBRATION STANDARDS PROGRAM. E. J. Overby. Intern. Rev. Cotton Allied Textile Inds. 26: 94-100 (June 1958). Through BCIRA 38: 649 (1958). (181)

The International Cotton Standards Program is conducted, under the auspices of the American Society for Testing Materials, by the Cotton Division of the Agricultural Marketing Service, U.S. Department of Agriculture. The principal objective of the program is to provide the mechanism by means of which any laboratory doing cotton fiber testing may calibrate its instruments or otherwise adjust its level of test results to a standard level. Initially, the program is limited to standard micronaire and fiber strength (flat bundle) tests. The analyzed results of two check tests are presented together with statistics on the numbers of laboratories participating in the scheme.

MATURITY DETERMINATION OF COTTON WITH SPECIAL REFERENCE TO THE SOVIET AND CZECHOSLOVAK STANDARDS. H.-P. Hartenhauer. Deut. Textiltech. 8, No. 7: 330-333 (1958). In German. Through BCIRA 38: 649 (1958). (182)

After a brief reference to the structure and growing process of the cotton fiber, the author compares the methods used in the Soviet Union and in Czechoslovakia for determining the degree of maturity. The former is based on the microscopic observation of the cotton fiber in its natural state, and grading it according to 11 maturity groups, the maturity being characterized (according to the GOST Standard 3274-46-B) as the ratio of fiber width to the width of its lumen, and expressed as maturity coefficient. The latter method consists in the microscopic observation of the fibers after swelling in 16.5% sodium hydroxide (CSN Standard 800 310) and grading them as mature, semimature, and dead fibers, the degree of maturity being expressed by a mean maturity number. It is intended to use these two methods (especially the Czechoslovak method) in the German Democratic Republic.

APPARATUS FOR THE MEASUREMENT OF FRICTIONAL FORCE BETWEEN COTTON FIBERS AND A STUDY OF THE RELATIONSHIPS BETWEEN FRICTIONAL FORCE AND FIBER PROPERTIES. C. Nanjundayya (Indian Central Cotton Comm.). J. Sci. Ind. Research (India) 17: 412-417 (Oct. 1958). (183)

Diagrs, graphs, table, 18 refs.

DETERMINATION OF COTTON FIBER MATURITY BY DYEING TECHNIQUE. K. S. Bhujang and C. Nanjundayya (Indian Central Cotton Comm.). J. Sci. Ind. Research (India) 17: 371-376 (Sept. 1958). (184)

A new dyeing technique employing a single acid dye is described for the quantitative estimation of the degree of maturity of cottons. The dye found suitable for the purpose is Carbolan Violet 2 RS, which gives a fast-to-washing and fast-to-light shade on cotton. Since a single dye is used, the quantity of dye taken up by a known weight of cotton can be easily estimated and correlated with the degree of maturity of cotton. Noncellulosic constituents of cotton do not influence the absorption of the dye by cotton. Graphs, tables, 9 refs.

VEGETABLE FIBERS: CLASSIFICATION, PLACE OF ORIGIN, PROPERTIES, AND USES. R. Ludovici. Riv. Tessile 13, No. 6: 623-626; No. 7: 719-723 (1958). In Italian. Through BCIRA 38: 648 (1958). (185)

In conclusion of the previous articles (see abstr. 4009/58), identification of the fibers by staining and microscopical examination is described and illustrated by photographs. An alphabetical list of the fibers mentioned and a bibliography are appended.

DEPENDENCE OF FILAMENT STRENGTH UPON ITS TEST LENGTH. PART 1. THEORETICAL PART. A. Sippel. Faserforsch. u. Textiltech. 9, No. 5: 163-167 (1958). In German. Through BCIRA 38: 648 (1958). (186)

On the basis of experiments and general considerations, the author rejects for oriented filaments from macromolecular materials the Weibull tensile strength theory and suggests an empirical formula for expressing the relationship between tensile strength and test length, a theory being advanced that the curve corresponding to the formula indicates only changes in tensile strength (in dependence of the test length) which are related to the position of pure macromolecules in the fiber. The difference between the strength values in this curve and the mean strength values measured for the respective test lengths give a measure of the content of impurities which adversely affect the tensile strength of the fibers.

CONTROL OF SETTING IN SYNTHETIC FIBERS, ESPECIALLY POLYAMIDES. W. Bobeth. Deut. Textiltech. 8, No. 8: 371-378 (1958). In German. Through BCIRA 38: 650 (1958). (187)

Possibilities for determining the setting state of textiles from manmade fibers are reviewed, with reference to physical, chemical, microchemical, and microscopic methods. It is shown that hot air treated material can be easily distinguished from saturated steam fixed material by means of the swelling reaction. A table is given, in which several methods for the characterization of setting conditions in Perlon filaments are listed for comparison.

NEW MECHANIZED TESTER FOR DETERMINING THE COMPRESSIBILITY OF FIBERS. L. Rudolph. Deut. Textiltech. 8, No. 8: 378-380 (1958). In German. Through BCIRA 38: 648 (1958). (188)

The apparatus described measures the elastic behavior of fibers to pressure (degree of compressibility and stiffness in %). The knowledge of these values may be of particular importance in the preparation of fiber blends from two or more fiber types. Factors affecting the measuring values, and the effect of fiber compressibility on the spinning process and the quality of yarns and finished products remain to be investigated in further experiments.

APPLICATION OF SPOT TESTS IN THE EXAMINATION OF SYNTHETIC FIBERS. PART 1. F. Feigl, V. Gentil, and E. Jungreis (Ministério da Agricultura, Brazil). Textile Research J. 28: 892-894 (Oct. 1958). (189)

Procedures for three tests are given: (1) Griess reagent is used to detect nitrogen in synthetic fibers; (2) acrylonitrile fibers may be detected by pyrolytic formation of thiocyanic acid; and (3) the acrylamide component in acrylonitrile fibers may be detected through chemical adsorption of rhodamine B. (This abstract is a correction of abstr. 4542/58). 11 refs.

COTTON FIBER MATURITY RAPIDLY PREDICTED WITH VARIABLE VOLUME OF SAMPLE IN MICRONAIRE. V. Sundaram and R. L. N. Iyengar (Indian Central Cotton Comm.). (Letter to the editor). Textile Research J. 28: 1045-1046 (Dec. 1958). (190)

MICROINVESTIGATIONS INTO THE HISTOLOGY OF POLYACRYLONITRILE FIBERS. E. Rockstroh. Deut. Textiltech. 8, No. 8: 381-382 (1958). In German. Through BCIRA 38: 650 (1958). (191)

Polyacrylonitrile fibers from various manufacturing processes (Prelana, Wolcrylon I and II) were treated with zinc iodochloride and their different reactivity is shown in photomicrographs.

ATTEMPTS TO INTRODUCE AMIDE CROSS-LINKS INTO WOOL. PART 2. THE ALKALINE THIOGLYCOLLATE EXTRACTION TEST FOR WOOL. F. G. Lennox (Wool Textile Research Labs., CSIRO, Australia). Textile Research J. 28: 949 (Nov. 1958). (192)

The extraction of wool with alkaline thioglycollate solutions has been developed as a routine test. 26 refs. (For part 1 see abstr. 121/59).

Yarns E2

SHORT-TERM IRREGULARITY OF ROLLER-DRAFTED YARNS AND SLIVERS. P. Grosberg (Leeds Univ.). J. Textile Inst. 49: T493-T515 (Oct. 1958). (193)

Various possible causes of the irregularity of roller-drawn slivers are considered and their effects analyzed. From the analysis it is shown that the "elasticity" of the sliver may play a large part in producing the irregularity of the sliver. Finally, a method for predicting the irregularity of yarns from the fiber length distribution and a determinable machine constant is developed. Graphs, 23 refs.

STUDY OF BLENDED WOOLEN STRUCTURES. PART 4. SOME ANALYTICAL METHODS FOR BLEND DETERMINATION. M. J. Coplan (Fabric Research Labs.). Textile Research J. 28: 956-964 (Nov. 1958). (194)

For statistical evaluation of blend variation along the length of strands, it is necessary to be able to determine the composition of a large number of small specimens. Microscopic techniques are useful but tedious. The present report describes two other methods which have been developed: densitometric and microanalytical spectrophotometric evaluation. Graphs, tables, 17 refs.

COHESION IN COMBED WOOL FIBERS AND IN OTHER FIBERS. A. Barella. Bull. Inst. Textile France No. 74: 47-71 (May 1958). In French. Through BCIRA 38: 651 (1958). (195)

The "minimum cohesion twist" is relatively independent of the initial yarn twist and the tension applied (if it does not exceed certain values), but depends upon the mean fiber length. The experimental results are not contradictory to the Hannah theory on the minimum cohesion twist. The "cohesion coefficient" depends linearly upon the fiber fineness, and there is a significant positive correlation between these two parameters. The study, carried out particularly on worsted yarn, was also extended to cotton and rayon staple.

QUALITY CONTROL IN SPINNING WITH THE USTER SPECTROGRAPH. H. Locher (Zellweger Ltd). Textile Merc. 139: 737-741 (Nov. 21, 1958). (196)

The mathematical basis of the Uster Spectrograph and its practical application for uniformity control are explained. Graphs, diagr.

Fabrics E3

DEVELOPMENT AND EVALUATION OF A LABORATORY TEST DEVICE TO MEASURE RESISTANCE OF TEXTILE FABRICS TO RAIN. N. H. Keeney. Lowell Technological Inst. Research Found., Lowell, Mass. Mar. 1957. 73 p. Order from Library of Congress, Photoduplication Service, Washington 25, D. C. Microfilm $4.50, photostat $12.30. PB 134 898. (197)

A series of water repellent fabrics were tested using the rainroom, hydrodynamic, and hydrostatic testers. Correlations between the hydrodynamic rainroom and hydrostatic-hydrodynamic test methods were obtained. Diagrs, graphs, tables.

TESTING THE FLAMMABILITY OF FLAMEPROOFED WORKING CLOTHES. W. Himmelreich. Deut. Textiltech. 8, No. 8: 411-413 (1958). In German. Through BCIRA 38: 653 (1958). (198)

Flammability of fabrics (especially cellulosic), historical development of flameproof finishes, and testing methods are reviewed, and it is shown that an effectively flameproofed fabric should not continue to burn after removal from the fire zone. Ammonium-salt impregnations are pointed out as being unsuitable for garments exposed mainly to radiating heat, because they cause high absorption of the heat and, consequently, premature destruction of the fabric.

DETERMINING THE PRESENCE OF MERCERIZATION IN COTTON: TENTATIVE TEST METHOD 89-1958. AATCC. Am. Dyestuff Reptr. 47: P941-P942 (Dec. 29, 1958). (199)

The barium number method as a test for mercerization may be used with dyed and undyed cotton yarns and fabrics. It will give an indication of the completeness of the reaction between the cotton and the mercerizing bath. The test cannot be used satisfactorily if durable finishes or fibers other than cotton are present.

PILLING AND ITS PREVENTION. T. Belleli. Bull. Inst. Textile France No. 74: 7-36 (May 1958). In French. Through BCIRA 38: 652 (1958). (200)

The pilling tendency and mechanism of pilling on woolen and manmade fiber fabrics (or wool/manmade fiber blends) are discussed, and the method used by the French Textile Institute for testing pill formation is described. Various factors responsible for pilling and means for eliminating it are reviewed (increasing the friction between the fibers and the cohesion of the fibers in the yarn, so as to prevent their migration). The frictional interfiber forces are shown to be to a certain extent related to pilling. The effect of several chemical finishes is examined, and it is shown that acrylic (Orlon-type) fabrics exhibit considerably reduced pilling tendency when defatted by extraction with alcohol or treated with soapy water. The soft handle of the fabric is thereby preserved.

THEORETICAL DETERMINATION OF TENSILE AND BENDING STRESSES OCCURRING IN CONVEYOR BELTS. W. Frenzel and H. Rothe. Faserforsch. u. Textiltech. 9, No. 6: 203-213 (1958). In German. Through BCIRA 38: 578 (1958). (201)

The calculation of the bending stress is based on the stress-elongation curve of the conveyor belt. This physical relationship between stress and elongation is expressed. Formulas are developed for the total stress, the optimum number of fabric layers, and the relative safety. It is also shown that the elasticity of a belt is, for the occurrence of the stress and its calculation, as important as the tensile strength, and must be taken into account in determining the dimensions and production of the belts.

DETECTION OF STREAKS IN DYED TEXTILES FROM CHEMICAL FILAMENTS BY LABORATORY TECHNIQUES. W. Friedmann. Faserforsch. u. Textiltech. 9, No. 7: 296-303 (1958). In German. Through BCIRA 38: 652 (1958). (202)

The most frequent causes of streakiness (originating from the raw material, processing, or finishing) are enumerated and testing techniques (general and special) for their identification are reviewed. Owing to the great variety of possible causes and often unknown case history, it is in most cases difficult or even impossible to obtain definite information on the origin of streak formation.

COLORFASTNESS TO PLEATING: TENTATIVE TEST METHOD 31-1958. AATCC. Am. Dyestuff Reptr. 47: P943 (Dec. 29, 1958). (203)

The test measures change in shade of dyed textiles which are to be subjected to a treatment with steam under pressure.

FABRIC STREAKS: NEW TECHNIQUE SHEDS LIGHT ON CAUSES. F. Schulze (E.I. du Pont de Nemours & Co.). Modern Textiles Mag. 39: 69-74, 89 (Dec. 1958). (204)

The La Marche technique for making plastic replicas of fabrics is described in detail. Only those streaks which are related to physical shape or form can transfer to the plastic. Plastic replication is therefore a specific test for distinguishing between internal streaks and external or physical streaks. The types of external streaks demonstrated include yarn texture, fabric configuration, and spacing streaks. Procedures for their analysis are also explained. Photos, 6 refs.

ARRANGEMENT FOR SERIES TESTING OF THE CREASE RECOVERY ANGLE ACCORDING TO A STANDARD METHOD. H. Langer. Deut. Textiltech. 8, No. 8: 389-391 (1958). In German. Through BCIRA 38: 651 (1958). (205)

Experiences and observations during measurement of the crease-recovery angle according to the preliminary DIN 53 890 specification are reported, with special reference to the effects of temperature and humidity, sampling, type of weighting, and accuracy of the method. It is shown that reliable results can be obtained under constant climatic and sampling conditions. The mechanism of the FIFT creasing-angle tester is described, and some supplementary items to be included in the final standard specification are suggested.

DETERMINATION OF FATIGUE PHENOMENA IN FABRICS BY MEANS OF REPEATED ALTERNATING STRESSES IN THE HIGHER FREQUENCY RANGE. G. Dischka and T. Hajmasy. Faserforsch. u. Textiltech. 9, No. 7: 285-298 (1958). In German. Through BCIRA 38: 651 (1958). (206)

The purpose of this investigation was to elucidate the stress elongation relationships occurring during the experiments and to find, by mathematical treatment, a constant for the fabric elasticity and internal friction. The vibration tester for examining fabric durability (developed by the Hungarian Textile Research Institute) is described, with reference to the vibration process, determination of the constants of the apparatus, experiments for determining the fatigue coefficients, and evaluation of the results.

CREASING TENDENCY OF FABRICS DURING WEAR. J. Mieck. Deut. Textiltech. 8, No. 8: 386-396 (1958). In German. Through BCIRA 38: 652 (1958). (207)

The method described makes it possible to determine visually the creasing tendency of fabrics during practical use. Agreement between the opinions of various examiners was, on the basis of statistical evaluation, satisfactory. The relationship between creasing tendency during wear and measurement of the crease-recovery angle according to DIN 53 890 was established by numerous experiments on fabric blends with different fiber components. Suitings showed for crease-recovery angles of over 160° an almost crease-free behavior; for 130-160°, 90-130°, and below 90°, their creasing tendency was, respectively, low, moderate, and high.

DISCUSSION OF WASH-AND-WEAR OR EASY-CARE TESTING METHODS AND STANDARDS. J. G. Stass (Burlington Inds.). Am. Dyestuff Reptr. 47: P888-P890, P894 (Dec. 15, 1958). (208)

INVESTIGATIONS INTO THE ABRASION TESTING OF TEXTILES. O. Schickhardt and F. Strecker. Textil-Praxis 13, No. 6: 572-577; No. 7: 741-744; No. 8: 830-834; No. 9: 916-920 (1958). In German. Through BCIRA 38: 652 (1958). (209)

Experiments are reported which were carried out with a view to developing a method in which the abrasion-resistance determination gives results in agreement with the abrasion effect occurring during practical use. The method is to be suitable for comparing the quality of two materials and should also make it possible to determine an absolute quality index which, together with other important properties, would permit grading of the material according to a point system. For this purpose, theoretical and practical investigations were carried out into the criteria of abrasion (hole formation, loss in strength, substance or weight, decrease in thickness, light or air permeability, capacity measurement as a measure of fiber substance present, appearance of the fabric), abrasion testers, abrading materials, and the principles and requirements of laboratory procedures. Comparison was also made between different materials of the same weave and the same volume, and a testing and evaluation method was developed which promises to satisfy the above-mentioned requirements.

NEW CONTROL DEVICES AND NEW METHODS FOR TESTING COTTON FIBERS, YARNS, AND FABRICS. PART 3. FABRICS. Bull. Inst. Textile France No. 74: 95-112 (May 1958). Through BCIRA 38: 652 (1958). (210)

Devices and methods for measuring the elongation, bursting strength, abrasion resistance, stiffness, permeability (to air and water), flammability, density, appearance, and shrinkage of cotton fabrics are reviewed. 136 refs.

ASSESSMENT OF WEATHERING FASTNESS: REVIEW OF THE PRESENT POSITION. K. McLaren (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 74: 759-762 (Nov. 1958). (211)

The difficulties encountered in devising a test for the determination of fastness to weathering are described, as well as the attempts made to overcome them. No immediate solution is in sight, but the problem is being jointly studied in England, France, Germany, and Switzerland. Graphs, 5 refs.

DETERMINATION OF FREE FORMALDEHYDE IN PERMANENTLY FINISHED FABRICS. W. Himmelreich and W. Vauck. Deut. Textiltech. 8, No. 8: 410 (1958). In German. Through BCIRA 38: 653 (1958). (212)

Determination of free formaldehyde in finished fabrics according to Tex N 660 006 (1956) is compared with the direct "ironing method" and the results are found to be in good agreement. It is suggested that the permissible free formaldehyde values should be specified according to the square-meter weight of the fabric.

TEST INSTRUMENTS NO. 2: CELANESE WRINKLE TESTER. C. H. Sturley. Nylon Outlook 1: 10-11 (Autumn 1958). (213)

The construction of the instrument and its use in testing are described. Photo.

CB(F) AREA VARIATION OF FABRICS. W. Wegener and E. G. Hoth. Textil-Praxis 13, No. 5: 484-488 (1958). In German. Through BCIRA 38: 651 (1958). (214)

The irregularity of a fabric is determined from the weight of square fabric sections, the value CB(F) expressing the variation coefficient between the weights (external variation coefficient) and depending upon the area F of the fabric pieces. As for a yarn, where the actual spinning process must be distinguished from the ideal spinning process, there is, for a fabric, a difference whether the yarn from ideal or real spinning processes was used in an "ideal" or actual weaving process. The ideal weaving process is characterized by several postulations, on the basis of which it is possible to calculate the area-variation curve of an ideal weaving process for any yarn and, in a special case, for a yarn from an ideal spinning process. An area-variation curve, determined by cutting and weighing of fabric pieces from an actual weaving process using a yarn from an actual spinning process, is presented together with the corresponding ideal curve (ideal spinning and weaving processes). The comparative value K, given as the ratio of the corresponding surface variation coefficients, shows the extent to which the real fabric approaches the optimum case (ideal spinning and weaving processes).

Other E4

COLORFASTNESS TO DAYLIGHT AT HIGH HUMIDITY: PROPOSED NEW TEST. Soc. Dyers & Colourists. Lightfastness Subcomm. J. Soc. Dyers Colourists 74: 756-758 (Nov. 1958). (215)

This method is intended for assessing the resistance of the color of textiles of all kinds and in all forms to the action of daylight under conditions of high effective humidity. 3 refs.

MOISTURE IN YARNS AND FABRICS: TECHNOLOGIST'S VIEW OF THE NATIONAL HOSIERY MANUFACTURERS' FEDERATION TESTING TECHNIQUE. N. Roper (Leicester School of Textiles). Hosiery Trade J. 65: 88-91 (Dec. 1958). (216)

The experiments described were carried out in order to verify the validity of the method devised by Alan Kershaw of the National Hosiery Manufacturers' Federation for determining moisture regain in wool fabrics and yarns. See abstr. 4223/58. Graphs, 4 refs.

HOW EFFECTIVE ARE ANTISTATIC AGENTS? Sensitive Research Instr. Corp. Skinner's Silk & Rayon Record 32: 1308 (Dec. 1958). (217)

The construction and use of a small test apparatus, found to be effective in measuring the properties of antistatic agents as applied to textiles, is described. Diagr, photo.

METHODS OF TESTING TEXTILES. METHOD 15. NONFIBROUS MATERIALS IN TEXTILES. Can. Textile J. 75: 76-78 (Dec. 12, 1958). (218)

This method describes procedures for the removal and quantitative determination of certain types of nonfibrous materials, e.g. water-soluble materials, oils, fats, waxes, sizes, resin finishes, iron and chromium, tin, and other inorganic materials. 3 refs.

MILL MANAGEMENT F

LIGHTING STANDARDS SOAR TO A NEW HIGH. H. R. Blackwell. Factory Management and Maintenance 116: 102-104 (Oct. 1958). (219)

New recommendations of the Illuminating Engineering Society call for more light for the eye to do the job rapidly and accurately. Some textile examples of changes in standards are given.

Industrial engineering F1

ASSESSING PRODUCTION LOSSES THROUGH MACHINE INTERFERENCE. J. G. Miller (Wool Inds. Research Assoc.). Textile Weekly 58(2): 1541-1542, 1545-1546 (Nov. 28, 1958). (220)

Machine interference is defined, and its practical effects are examined. The Wright/Fry, Dale Jones, Ashcroft, and Renson/Cox solutions are described and compared.

WORK STUDY IN THE COTTON AND WOOLEN INDUSTRIES. PART 2. E. Ford. Fibres 19: 367-369 (Nov./Dec. 1958). (221)

The discussion of the applications and the various techniques of work study is continued. Courses of training in work study available in the cotton and woolen industries are described, and some case histories are given.

INVENTORY CONTROL BOARD. M. C. Gross. Textile Inds. 122: 111-112 (Dec. 1958). (222)

A daily production inventory control board is used to prevent overproduction and to correct impending shortages. Bottlenecks are immediately visualized and corrective measures set up before such restrictions become serious factors to the steady and controlled flow of stock. A typical control board is described and illustrated.

YARN QUALITY VIA TECHNOLOGY. A. Cross (Charles Crabtree Ltd). Textile Merc. 139: 625-629 (Oct. 31, 1958). (223)

Factors affecting yarn quality are discussed, such as cleaning, neps, twist, and periodicities.

MARGINAL NOTCHED CARDS FACILITATE PRODUCTION CONTROL. W. E. Sharp (Lawrence Mfg. Co.). Am. Textile Reptr. 72: 24-25, 27 (Dec. 18, 1958). (224)

The use of marginal notched cards for production control and defect analysis is described.

INCENTIVES AND WORK STUDY. J. Butterworth. Fibres 19: 360-363 (Nov./Dec. 1958). (225)

The author discusses the need for financial incentives in modern industry. He takes up the various schemes which can be adopted and the characteristics of a successful scheme.

HOW TO AUDIT OBSOLESCENCE. C. W. Boyce. Factory Management and Maintenance 116: 84-89 (Nov. 1958). (226)

A new approach to a technological obsolescence audit based on the performance of functions and services required to turn out the right quality and quantity of product in the time available. It is a compromise between the extremes of a complete systems analysis and a simple review of new models of equipment now in use. Tables.

TIME AND MOTION STUDIES IN RING SPINNING. F. Wildfeuer. Textil-Praxis 13, No. 7: 675-678 (1958). In German. Through BCIRA 38: 659 (1958). (227)

Plant and equipment F2

ORGANIZED PLANT LUBRICATION. PART 2. R. K. Gould (Texas Co.). Textile Bull. 84: 65-68 (Nov. 1958). (228)

The best means of surveying the lubrication requirements for all plant equipment and lubricant handling methods are described.

ORGANIZED PLANT LUBRICATION. PART 3. R. K. Gould (Texas Co.). Textile Bull. 84: 62-65 (Dec. 1958). (229)

The benefits to be realized from controlled lubricant application are cited. Plant experience with such a system is described.

ALIGNING V-BELTS. Textile Bull. 84: 68-69 (Nov. 1958). (230)

The correct method for properly aligning V-belt sheaves and the application of the correct tension to V-belts is described in this article. Other points covered are sheave inspection method, dangers of oily belts, and proper storage of V-belts. Diagrs.

MAGNESIUM: APPLICATIONS IN THE TEXTILE INDUSTRY. J. Wright (Magnesium Elektron Ltd). Fibres 19: 350-353, 358 (Nov./Dec. 1958). (231)

The use of magnesium alloys in machine parts with intermittent or reciprocating motions helps to increase strength and stiffness, without too much increase in weight. The growing use of magnesium in the textile industry is discussed. Photos.

HELP FOR MANAGEMENT, OVERHAULERS. A. B. Roberts (China Grove Cotton Mills Co.). Textile Inds. 122: 72-73 (Dec. 1958). (232)

The simple records system for maintenance and overhauling described saves time and is easy to install. Sample sheets are illustrated.

SNAP ACTION SWITCHES ON TEXTILE MACHINERY. L. Walter. Textile Mfr. 84: 546-548 (Nov. 1958). (233)

The practical use of switch mechanisms and design details which influence correct choice of type and location are discussed. Diagrs, photos.

MATERIALS HANDLING. Can. Textile J. 75: 33-34, 37-43, 59-62 (Nov. 28, 1958). (234)

Materials handling and process carriers in Valleyfield, Quebec, textile mills, by R. P. Brodie, p. 33-34; Materials handling at du Pont of Canada's nylon plant at Kingston, Ontario, by P. H. Skelton, p. 37-38; Efficiency in materials handling, by E. W. Fair, p. 39-40; Developments in materials handling, by J. C. Whitehurst, p. 41-43; Materials handling in the textile industry, by A. S. Wrobleski (Can. MonoRail Co. Ltd), p. 59-62.

SCIENCES G

Chemistry G1

ALKYLOLAMIDE DETERGENTS. T. H. Kritchevsky (Stepan Chem. Co.). Soap Chem. Specialties 34: 48-50 (Nov. 1958). (235)

Alkylolamides improve foam, detergency, viscosity, and anticorrosive action of syndets and specialties. They are discussed under the headings: chemistry, properties, viscosity, foam stabilization, corrosion inhibition, and applications.

TEXTILE USES OF SYNDETS AND SOAP. G. M. Gantz (Gen. Aniline & Film Corp.). J. Am. Oil Chemists Soc. 35: 650-652 (Nov. 1958). (236)

The uses of syndets and soap in textile processing are surveyed. Tables, 12 refs.

ELECTRICAL FORCES AFFECTING SOIL AND SUBSTRATE IN THE DETERGENCY PROCESS: ZETA POTENTIAL. J. C. Harris (Monsanto Chem. Co.). Textile Research J. 28: 912-928 (Nov. 1958). (237)

An important electrokinetic measurement, zeta potential, is that of the difference in potential between the immovable layer attached to the surface of a solid phase (soil or substrate) and the movable part of the diffuse layer in the body of the detergent liquid. Correlations have been obtained which indicate that, in a detergent system, it is desirable that the zeta potentials of soil particles and substrate become nearly equal to reduce attractive forces tending to cause them to adhere. The effect of surfactants and electrolytes upon the zeta potential of soils and substrates has been collated, permitting an estimate of the areas in need of further elucidation. Available correlations between zeta potential and suspension values, critical micelle concentration, and detergency values are cited. Graphs, tables, 42 refs.

CATALYSTS IN PHOTODEGRADATION OF TEXTILE FIBERS. A. Sippel. Verhandlungsber. Kolloid-Ges. 18: 19-23 (1958). Through Chem. Abstr. 52: 14174h (1958). (238)

The influence of catalysts such as titanium dioxide and iron added to cellulose acetate was examined by two methods: tear resistance and viscosity measurements. The value of m_o (=kk', where k is the velocity constant of the decrease of resistance to tearing and k' is the velocity constant of the decrease of polymerization degree) is independent of catalyst influences but dependend on the presence of ultraviolet absorbers.

PHOTOCHEMICAL TENDERING OF POLYESTER FIBERS. W. Schefer. Textil-Rundschau 13, No. 6: 336-346; No. 7: 396-411 (1958). In German. Through BCIRA 38: 615 (1958). (239)

In order to elucidate the mechanism of photochemical degradation of Terylene and Dacron, artificial light sources such as mercury vapor lamps (with a spectrum differing from the sunlight spectrum) were used under extreme climatic (temperature and humidity) conditions. The photochemical processes taking place during irradiation are attributed mainly to the cleavage of molecule chains (probably C-O-linkages). Factors affecting the fiber degradation and methods for testing the lightfastness of polyester products are discussed and it is pointed out that the photochemical decomposition is caused in the first place by ultra-violet rays of the wave-length range 270-340 mμ. 44 references.

FIBER SWELLING AND DETERGENT ADSORPTION IN DETERGENT/TEXTILE FIBER SYSTEMS. H. C. Evans (Shell Research Ltd). J. Colloid Sci. 13: 537-552 (Dec. 1958). (240)

The adsorption of sodium alkyl sulfates and sodium oleate on various textile fibers passes through a maximum, and sometimes subsequently a minimum, as the concentration of surface-active material in the aqueous phase is increased. The transverse swelling of single fibers, constant in dilute solutions of surface-active compound, decreases at the concentration corresponding to maximum adsorption. The shape of the adsorption/concentration graph can be explained on the basis of adsorption of single ions on a changing surface, and this hypothesis can also explain the dialysis of surface-active compounds. The effects of alkali and inorganic electrolyte on the adsorption isotherms are also discussed. Graphs, tables, 23 refs.

DETERGENT APPLICATION OF THE MEASUREMENT OF CRITICAL MICELLE CONCENTRATION. J. C. Harris (Monsanto Chem. Co.). J. Am. Oil Chemists Soc. 35: 670-674 (Nov. 1958). (241)

The measurement of critical micelle concentration is discussed from the viewpoint of practical detergent application. Micelles are briefly characterized, and methods for measurement are discussed. The difficulties of measuring nonionic surfactant critical concentrations are indicated, and several applicable methods are described. The practical detergent applications of critical micelle concentration, as affected by electrolyte builder combinations, are illustrated. A concise summary of the principles governing micelle formation is developed. Graphs, 28 refs.

GENERAL DETERGENCY. R. E. Wolfrom (Rohm & Haas Co.). J. Am. Oil Chemists Soc. 35: 652-664 (Nov. 1958). (242)

Detergency is surveyed under the headings: detergency testing; soils, soiling, and surfaces; mechanism of soil removal; factors influencing soil removal; commercial laundry; household laundry; drycleaning; and dishwashing. Photos, diagrs, graphs, tables, 22 refs.

PHYSICAL CHANGES IN CELLULOSE IMMERSED IN AQUEOUS SOLUTIONS OF FORMALDEHYDE AND GLYOXAL. B. Farrow, W. J. Roff, and S. C. Simmens. (Letter to the editor). J. Textile Inst. 49: T516-T517 (Oct. 1958). (243)

SOILING OF CELLULOSE HYDRATE FIBERS. PART 2. LIGHT- AND ELECTRON-MICROSCOPIC INVESTIGATIONS. W. Bandel. Melliand Textilber. 39, No. 7: 800-803 (1958). In German. Through BCIRA 38: 615 (1958). (244)

The low soilability found in previous experiments in cellulose hydrate fibers with round cross-section is explained on the basis of photo- and electron-micrographs. It is shown that, in the commercial viscose fibers, deposition of the dirt particles takes place mainly in the longitudinal grooves on the fiber surface. Viscose fibers with round cross-section, e.g. Floxan, show no distinctly preferred regions for the adherence of the dirt, pick it up less easily, and are also more easy to clean. These fundamental differences in the soiling behavior of the fiber types examined are not eliminated by antisoiling finishes.

INFLUENCE OF VARIOUS ADDITIVES ON SOILING AND SOIL REMOVAL CHARACTERISTICS OF KNITTED FABRICS. AATCC. Midwest Sect. Am. Dyestuff Reptr. 47: P933-P940 (Dec. 29, 1958). (245)

An investigation was conducted to determine the effect of selected additives on the soiling and soil-removal properties for a series of typical fibers. The following trends are indicated: (1) surface active agents tend to decrease dry soiling resistance; (2) colloidal silica finishes significantly improve the soil resistance of all fibers except Dacron; (3) the soil resistance of Dacron is decreased when additives are applied; and (4) soil removal by washing generally remains unaffected by most additives. Photos, graphs, tables.

SOME OBSERVATIONS ON THE RELATIONSHIP BETWEEN DIRT REMOVAL AND FIBER AND FABRIC SUBSTRATE. R. E. Wagg (Brit. Launderers' Research Assoc.). Proc. Intern. Congr. Surface Activity 4: 43-51 (1957). (246)

Washing experiments have been carried out using natural and manmade fibers and fabrics made from them and the amount of dirt removed found to depend on the nature of the fiber, the construction of the fabric, and the nature of the detergent solution used. Impurities in, and different finishes on, the fiber and fabrics also influenced the results. Graphs. Tables. 5 references.

FABRIC TREATMENT WITH CATIONIC SOFTENERS. W. M. Linfield, J. C. Sherrill, G. A. Davis, and R. M. Raschke (Armour & Co.). J. Am. Oil Chemists Soc. 35: 590-593 (Nov. 1958). (247)

Four quaternary ammonium compounds were studied. They possessed marked substantivity for cellulosic fabrics. Substantivity was determined quantitatively and rates of exhaustion were established. Amount of softener add-on has an effect upon the rate of water absorption of the treated fabric. Antistatic properties were studied by a dynamic friction procedure. Diagr, graphs, tables, 5 refs.

DEGREE OF POLYMERIZATION AND ITS DISTRIBUTION IN CELLULOSE RAYONS. PART 6. RELATION BETWEEN THE INTRINSIC VISCOSITY AND DEGREE OF POLYMERIZATION OF CELLULOSE NITRATE. W. G. Harland (Brit. Cotton Ind. Research Assoc.). J. Textile Inst. 49: T478-T492 (Oct. 1958). (248)

IMPROVEMENT OF THERMAL STABILITY OF TEXTILE FIBERS. PROGRESS REPORT NO. 4, COVERING THE PERIOD 1 JULY 1956 - 30 JUNE 1957, UNDER CONTRACT N 140(132) 57745B. F. R. Eirich, I. Saad, and L. M. Leonard. Polytechnic Inst. of Polymer Research, Brooklyn, N.Y. July 1957. 40 p. Order from Library of Congress, Photoduplication Service, Washington 25, D.C. Microfilm $3.00, photostat $6.30. PB 132 855. (249)

The purpose of this investigation was to increase the thermal stability of synthetic textile fibers with nylon as prototype. The literature survey showed work on cellulosic fibers but nothing of relevance for synthetic fibers. A surface treatment was sought which would lead to a crosslinking or to infusible products on heating. Treatment with acrylonitrile seems to be the most promising approach. Soaking with aqueous catalyst and exposure to monomer vapor was the most promising procedure. The results of the screening tests and the various surface polymerizations were followed by a type of melting point apparatus designed to test the heat resistance of the fiber under its own weight. Diagrs, graph, tables.

PORE SIZE OF KERATIN. D. Harrison and J. B. Speakman (Leeds Univ.). Textile Research J. 28: 1005-1007 (Dec. 1958). (250)

The extent to which wool may be iodinated with alcoholic solutions of iodine at 22.2° C has been examined as a function of the size of the alcohol molecule. The fine structure of wool seems to be inaccessible to molecules larger than those of n-propanol. 7 refs.

DETERGENT ADSORPTION ON SOIL AND SUBSTRATE. PARTS 1 AND 2. J. C. Harris (Monsanto Chem. Co.). Soap Chem. Specialties 34: 41-43, 101 (Nov. 1958); 59-62, 233 (Dec. 1958). (251)

A review under the headings: methods of estimation, air solution interface characteristics, molecular film structure, and adsorption on soil. Diagrs, tables, refs.

CELLULOSICS. W. D. Paist (Celanese Corp.). Reinhold Pub. Corp., N.Y. 1958. 270 p. $5.75. (252)

Properties and applications of the cellulosics are discussed under the headings: the cellulosics, chemistry of the cellulosics, general properties of the cellulosics, fabrication, applications of extruded and cast cellulosics, applications of injection molded cellulosics, protective coatings, applications of the cellulosics as adhesives and binders, miscellaneous applications, fibers and fabrics, new developments.

Physics G2

RADIOISOTOPES AND THEIR USES IN THE TEXTILE INDUSTRY. M. Goens. Rev. Textilis 14, No. 5: 25-29 (1958). In French. Through BCIRA 38: 647 (1958). (253)

In this review, the author discusses the uses of radioisotopes in eliminating static electricity, destroying parasites, irradiating textile materials to compare their properties before and after the treatment, thickness measurement, control of chemical processes, and as tracers (in spinning, dyeing, detergency evaluation, etc.). 17 refs.

STUDIES IN THE STATIC ELECTRIFICATION OF FILAMENTS. R. G. Cunningham and D. J. Montgomery (Michigan State Univ.). Textile Research J. 28: 971-979 (Dec. 1958). (254)

An apparatus has been constructed to rub filaments together under controlled mechanical and ambient conditions and to measure the charge remaining after separation. A photomultiplier has been added near the filaments to detect the incidence of electrical breakdown of the atmosphere. Many of Hersh's findings for 45°-45° rubs have been confirmed, specifically those on reproducibility and triboelectric series. On the other hand, some findings have not been substantiated when the range of variables is extended. Photos, table, graphs, 11 refs.

Biology G3

BEHAVIOR OF FOAM RUBBER AND LATEX FOAM TOWARDS BACTERIA. M. Nopitsch and E. Möbus. Melliand Textilber. 39, No. 5: 557-560 (1958). In German. Through BCIRA 38: 579 (1958). (255)

EFFECT OF MERCERIZATION ON COTTON'S RESISTANCE TO MICROORGANISMS. J. Cyrot (Inst. Textile de France). (Letter to the editor). Textile Research J. 28: 1048 (Dec. 1958). (256)

MISCELLANY H

INTERNATIONAL TEXTILE MACHINERY EXHIBITION, MANCHESTER. Textile Recorder 76: 93-112 (Dec. 1958). (257)

Preparatory and spinning machinery for cotton, by F. Charnley, p. 93-95; Machines for woolen and worsted spinning, by P. P. Townend, p. 96-97; Warp and weft preparation machines, by D. Brunnschweiler, p. 98-100; Weaving and ancillary machinery, by D. C. Snowden, p. 101-103; Equipment for dyeing and finishing, by J. W. Bell and C. S. Whewell, p. 104-110; Instruments for testing and quality control, by W. Onions, p. 110-112.

MODERN MATERIALS: ADVANCES IN DEVELOPMENT AND APPLICATIONS. v. 1. H. H. Hausner, ed. Academic Press, N.Y. 1958. 402 p. $12.50. (258)

Sections of textile interest include: Synthetic rubbers for special service conditions, by F. A. Bovey, p. 65-141; Fiber materials, by T. D. Callinan, p. 143-185; High voltage insulation papers, by W. A. Del Mar, p. 187-216. Extensive bibliographies.

TEXTILE INDUSTRIES ANNUAL PRODUCT PARADE AND BUYER'S GUIDE ISSUE. Textile Inds. 122: 1-266 (Mid-Nov. 1958). (259)

GREENVILLE SHOW. Modern Textiles Mag. 39: 38-40, 62-63, 75-76, 87 (Dec. 1958). (260)

TEXTILE TERMS AND DEFINITIONS. J. Textile Inst. 49: P585-P597 (Oct. 1958). (261)

A number of tentative definitions are presented.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS — A

Natural fibers — A1

COTTON SAMPLER. G. N. Franks. USP 2 859 485, Nov. 11, 1958. (262)

Automatic and continuous apparatus for taking cotton samples directly from condenser immediately prior to baling.

Manmade fibers — A2

MODIFIED FILAMENT WITH POROUS SURFACE. S. B. Wiczer. USP 2 862 284, Dec. 2, 1958. (263)

A gas-forming agent is incorporated into the surface of an extruded filament, and on heating the surface acquires an irregular, bubbly character.

SUNLIGHT-RESISTANT CELLULOSE ACETATE. R. W. Singleton, W. B. Horback, J. L. Riley, and B. S. Sprague (to Celanese Corp.). USP 2 862 833, Dec. 2, 1958. (264)

Cellulose acetate filaments obtained by the saponification of stretched wet spun cellulose acetate are made resistant to sunlight by the application of an ultraviolet stabilizer to their surfaces.

YARN PRODUCTION — B

PRODUCTION OF CUT FIBERS FROM CONTINUOUS FILAMENTS. Soc. Rhodiaceta. BP 800 899, Sept. 3, 1958. Through BCIRA 38: 631 (1958). (265)

The apparatus comprises (1) a rotary support, (2) a pair of parallel plates, (3) a series of cutting heads angularly spaced apart and extending between the plates, (4) a clamp and movable knife carried by each cutting head, (5) means for opening and closing the clamps so as to release or grip the sliver, (6) means for moving the knives transversely of the cutting heads, and (7) control means to close an adjacent pair of clamps, then to move the knife, open one of the clamps and close a third clamp adjacent to the other clamp, and thereafter to move the next knife between the new pair of closed clamps.

DRAFTING OF STAPLE FIBER. N. Riches (to Brit. Nylon Spinners Ltd). BP 800 432, Aug. 27, 1958. Through BCIRA 38: 636 (1958). (266)

The invention relates to a roller drafting system, particularly for staple fiber, designed to secure effective randomization lengthwise. It consists of feed rollers and an even number (two, etc.) of pairs of drafting rollers the contacting surfaces of which are comprised of portions having correspondingly different radii, the driving and driven drafting rollers of each pair being similar in shape. The contacting surfaces may be concave and convex, respectively, or conical of opposed slopes.

DRAFTING MECHANISM. SKF Kugellagerfabriken GmbH. BP 801 071, Sept. 10, 1958. Through BCIRA 38: 635 (1958). (267)

The device comprises (1) a pivotal weighting arm that carries (2) spring-weighted top rollers and has (3) a catch mechanism actuated by (4) a lever to keep the weighting arm in operative position. Lever (4) can move towards and away from the rollers (2) and is also pivoted to an auxiliary lever (5) so that, when it is moved towards the rollers, lever (5) moves to bear against a stationary member of the drafting mechanism and maintains this in operative position.

CRIMPED NYLON. J. A. Place (to Brit. Nylon Spinners Ltd). BP 801 147, Sept. 10, 1958. Through BCIRA 38: 637 (1958). (268)

A twisted thermoplastic multifilament yarn (e.g. nylon) is passed under tension over a deforming edge at a temperature between 100° C and point 15° C below the melting point of the yarn. The yarn is bent through an angle of about 150° so that the paths of individual filaments are perpendicular to that part of the edge at which contact is made. On relaxing, the yarn is crimped.

TEXTILE FIBER CONDITIONING. E. H. Rossin (to Monsanto Chem. Co.). USP 2 859 135, Nov. 4, 1958. (269)

Fibers having improved interfiber friction which are readily spun into high tensile strength yarns result from the application, prior to spinning, of an aqueous dispersion of fine discrete particles of water-insoluble thermoplastic resin, e.g. polystyrene, polyvinyl chloride.

DRAFTING ROLL COVERS. R. A. Garrett (to Armstrong Cork Co.). USP 2 858 283, Oct. 28, 1958. (270)

Drafting roll covers, etc., containing a matrix of a butadiene-acrylonitrile copolymer, glue, and a surface active agent.

APPARATUS AND PROCESS FOR CLEANING WOOL FIBERS IN THE DRY STATE. A. Boer (to Bancroft-Brillotex Intern. SA). USP 2 858 573, Nov. 4, 1958. (271)

Wool fibers and a grease-absorbent detergent powder intermingle and pass through a series of calender rolls so that the fibers are simultaneously cleaned and drafted.

WORKING SURFACE FOR DRAFTING ROLLS AND APRONS. R. A. Garrett (to Armstrong Cork Co.). USP 2 860 382, Nov. 18, 1958. (272)

Static-free drafting roll covers and aprons are formed of a plasticized vinyl chloride/vinyl acetate resin.

LEASING MECHANISM FOR YARN PROCESSING MACHINES. T. F. Suggs (to Cocker Mach. & Foundry Co.). USP 2 860 400, Nov. 18, 1958. (273)

Leasing mechanism for machines used in the preparation or treatment of multiple yarns drawn from supplies by a pair of opposed nip rolls for delivery to the machines.

TOW CRIMPING APPARATUS. H. D. Fardon, Jr., and H. J. Pike, Jr. (to Allied Chem. Corp.). USP 2 862 279, Dec. 2, 1958. (274)

Fusion of filaments is avoided in the crimping chamber by spraying liquid (e.g. water) into the crevice where a surface of a feed roll meets a wall of the crimping chamber.

YARN PROCESSING APPARATUS. J. L. Riley (to Celanese Corp.). USP 2 862 351, Dec. 2, 1958. (275)

Back guide and positively driven feed roll for continuously feeding a yarn from one point to another.

Carding and combing B2

STRAND SUCTION ARRANGEMENT FOR CARDING ENGINES. H. Berberich (to Thoma Co. GmbH). USP 2 857 627, Oct. 28, 1958. (276)

The suction arrangement claimed results in about 80% recovery of broken strands since, when breakage occurs, the broken strand is immediately extracted instead of being able to drop down and cause further breakage.

GILL BOX FALLER BAR. A. A. Spisak (to Warner & Swasey Co.). USP 2 860 381, Nov. 18, 1958. (277)

Faller bar construction which ensures the proper spaced relationship of the longitudinal series of pins anchored in the faller bar with each other and with the bar.

MACHINE FOR PARALLELIZING FIBERS IN A WEB OF WOOL. A. Boer (to Bancroft-Brillotex Intern. SA). USP 2 858 574, Nov. 4, 1958. (278)

A web of wool fibers (randomly oriented) is subjected to the action of alternately arranged sets of fiber drafting and fiber subdividing rollers so that a web is obtained with individual fibers parallel and free of intertwining. It can be converted directly into yarn.

Drawing and roving B3

DRAFTING ROLL CLEARER. J. S. Dudley (to Whitin Mach. Works). USP 2 858 575, Nov. 4, 1958. (279)

TOP CLEARER ROLL CONSTRUCTION. E. F. Rose. USP 2 858 576, Nov. 4, 1958. (280)

Clearer roll which brushes or flicks the fibers from the top drafting roll, allowing the fibers to be removed by conventional overhead blowers or suction devices.

DRAWING FRAME SLIVER CONTROLLING ENCLOSURE. P. B. West (to Saco-Lowell Shops). USP 2 858 577, Nov. 4, 1958. (281)

Controlling enclosure for the sliver web moving from the nip of the drafting output rolls of the frame to the nip of the rolls in the calendering mechanism.

GILL BOX. A. A. Spisak (to Warner & Swasey Co.). USP 2 862 248, Dec. 2, 1958. (282)

Buffering mechanism for cushioning the conductors which guide the transfer of the faller bars.

DRAWING FRAME AND DRAFTING ROLL CLEARER SYSTEM. J. S. Dudley, W. J. Langlois, and J. H. L. Roy (to Whitin Mach. Works). USP 2 862 249, Dec. 2, 1958. (283)

Pneumatic apparatus for removing fly and lint from drawing frame drafting rolls and holding the waste material.

Spinning, winding, twisting B4

YARN TENSION REGULATING DEVICE. Barmer Maschinenfabrik AG. BP 800 537, Aug. 27, 1958. (Addition to BP 755 588). Through BCIRA 38: 637 (1958). (284)

The parent invention relates particularly to cabling spindles and claims a wire device with 2 legs, one mounted for rotation in a yarn guide in or on the top of a bobbin tube, and the other rotating about the guide and having an eyelet and bent-in part that bears against an external shoulder of the guide so as to exert a braking effect. The present invention develops further a proposal of the parent invention, to increase this effect and therefore the tension in the yarn coming from the delivery bobbin by using a permanent magnet.

THREAD TENSIONING APPARATUS FOR TWISTING SPINDLES. W. Lenk (to Barmer Maschinenfabrik AG). USP 2 859 001, Nov. 4, 1958. (285)

DISCONNECTING DEVICE FOR YARN TWISTING MACHINES, ESPECIALLY FOR DOUBLE-TWIST YARN TWISTING MACHINES. Barmer Maschinenfabrik AG. BP 800 539, Aug. 27, 1958. Through BCIRA 38: 636 (1958). (286)

A device in which a lever operates to stop a twisting spindle and disengage a winding bobbin from its driving roller in response to a slackening in yarn tension comprises (1) a rail that can move towards and away from a pressure surface on the lever and (2) a two-armed yarn detector lever one arm of which is automatically movable in response to slackening so as to push a packing member between the rail and the lever.

RING SPINNING APPARATUS. F. A. Smith (to Brit. Nylon Spinners Ltd). BP 800 555, Aug. 27, 1958. Through BCIRA 38: 636 (1958). (287)

The ring and ring rail are so mounted that the angle of intersection between the axes of the ring and spindle is between 2° and 10°, whereby a relative high speed to-and-fro motion in the axial direction is superimposed on the ordinary relative motion between the traveler and a point on the bobbin due to the traversing of the ring rail. The effect is that the yarn is cross-wound on the bobbin.

STORAGE DEVICES FOR THE REPLACEMENT BOBBINS OF SPEED AND RING SPINNING FRAMES. J. Noguera (to Casablancas High Draft Co. Ltd). BP 800 952, Sept. 3, 1958. Through BCIRA 38: 636 (1958). (288)

The full replacement bobbins are suspended obliquely from holders attached to a rail that extends lengthwise of the creel. The lower ends of the bobbins are within easy reach of the operative and the usual top creel boards may be dispensed with.

TWISTING AND CRIMPING OF FILAMENTS. D. F. Arthur and A. F. Weller (to Brit. Nylon Spinners Ltd). BP 801 335, Sept. 10, 1958. (Addition to BP 797 051). Through BCIRA 38: 636 (1958). (289)

The parent invention related to means for imparting a false twist (followed by heat-setting to give a crimped yarn) in which the running filamentary yarn made contact with a surface of high coefficient of friction around one end of a twist tube. It is now specified that the ratio of the filament speed to the surface speed of the contact surface shall be not less than 0.5. Details (for nylon yarn) are given in 5 examples.

FALSE TWISTING MACHINES. E. P. R. Scragg and A. Dobson (to E. Scragg & Sons Ltd). BP 801 343, Sept. 10, 1958. Through BCIRA 38: 636 (1958). (290)

Below a takeup tube resting on and driven by a roller is arranged a pair of feed rollers, one above and one below the false-twist unit. These feed rollers are lapped by the yarn and can be driven at various speeds by contact with driving rollers. The false-twist unit can be moved away from its driving belt and the feed rollers simultaneously lifted from their driving rollers by a single movement of a displacement device, reverse operation of which restores the former conditions.

ROD WIPING DEVICE FOR RING SPINNING FRAMES. W. K. Crawford, Sr. USP 2 859 989, Nov. 11, 1958. (291)

YARN TENSIONING DEVICE FOR THREADING-IN WHEN STRETCHING IN DRAW TWISTING. J. Eshuis (to Am. Enka Corp.). USP 2 855 749, Oct. 14, 1958. (292)

BOTTOM DRAFTING ROLL BEARING CAPS OR COVERS. L. M. Cotchett (to Textile Eng. Corp.). USP 2 857 628, Oct. 28, 1958. (293)

Method of shielding the bearing surfaces which support the bottom rolls from the entry of lint, fly, dirt, or other foreign matter.

TWISTING APPARATUS FOR PLY YARNS. A. W. Vibber. USP 2 857 730, Oct. 28, 1958. (294)

Mechanism for detecting and controlling tension in the loop or balloon of a yarn at the plying spindle.

SPINNING, DOUBLING, AND TWISTING MACHINE RINGS. P. F. Grishin (to T. M. M. (Res.) Ltd). USP 2 857 732, Oct. 28, 1958. (295)

Ring which is designed for use with an elliptical traveler so that a long traveler life is obtained even when spinning large packages at high speeds.

WINDING MACHINE. E. A. Wentz (to Specialties Develop. Corp.). USP 2 858 992, Nov. 4, 1958. (296)

For applying resin impregnated yarns onto cylindrical receptacles for storing fluids under pressure.

BOBBIN. K. M. McLellan (to Industrial Rayon Corp.). USP 2 859 000, Nov. 4, 1958. (297)

Flanged bobbin adapted to receive a transfer tail on one of its flanges.

MOUNTING AND LUBRICATING MEANS FOR VERTICAL SPINDLES. A. H. Hamilton. USP 2 859 584, Nov. 11, 1958. (298)

The lower end of the spindle fits in a well and has a rounded lower portion which rests on a ball positioned in the bottom of the well. The well is provided with means for forced liquid lubrication.

BOBBIN. D. van Katwijk (Netherlands). USP 2 860 843, Nov. 18, 1958. (299)

The external helical groove of the bobbin has a fluted bottom surface to make possible extremely high unwinding speeds without yarn breakage.

YARN TENSION DEVICE FOR WINDING MACHINES. C. J. Price (to E. I. du Pont de Nemours & Co.). USP 2 860 844, Nov. 18, 1958. (300)

The tension device is located out of line between the yarn guide and bobbin so that the angle made by the yarn in passing through the tension device decreases with increasing accumulation of yarn on the bobbin.

ELASTIC SLEEVE FOR SPINNING FRAME DRAFTING ROLLS. G. Fusaroli (to Sampre SA Meccanica Precisione). USP 2 862 250, Dec. 2, 1958. (301)

Yarns B5

VINYL RESIN IMPREGNATED RAYON BALING TWINE. E. Lewis (to Am. Viscose Corp.). USP 2 856 750, Oct. 21, 1958. (302)

YARN PACKAGE IDENTIFICATION. R. Davidson and E. E. Walker (to Brit. Celanese Ltd). USP 2 859 547, Nov. 11, 1958. (303)

A label in the form of a spring cap attached to the yarn package support is used for identifying the nature of the yarns wound on the support.

CORE YARNS. S. P. Parker (to Callaway Mills Co.). USP 2 859 583, Nov. 11, 1958. (304)

Method and apparatus for producing yarns in which the core is a high strength, continuous filament yarn such as nylon, rayon, or a polyester fiber, and the wrapping is of cotton staple fiber yarn.

TIRE CORD TREATMENT. G. K. Klausner (to Industrial Rayon Corp.). USP 2 862 281, Dec. 2, 1958. (305)

Filaments, fibers, yarns, and cords with improved adhesion to rubber are obtained through treatment with an isocyanate reaction product which decomposes to an isocyanate above 105° C.

SHRINKABLE WRAPPER FOR WOUND FILAMENTARY PACKAGES. O. A. Battista and G. G. Whytlaw (to Am. Viscose Corp.). USP 2 862 614 and 2 862 615, Dec. 2, 1958. (306)

The wrapper is characterized by high wet strength and porosity, and it shrinks with the wrapped package during drying after liquid treatment.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

DRESSING OF YARNS IN WARP FORM. L. Pownall (to Brit. Nylon Spinners Ltd). BP 800 520, Aug. 27, 1958. Through BCIRA 38: 639 (1958). (307)

The liquid dressing is supplied continuously, via a wick, to a felt-covered roller that bears against, and is driven by, the sheet of warps as they pass to a beam.

STROKE CONTROL MECHANISM FOR TRAVERSING THREAD GUIDES OF WINDING MACHINES. W. Siegenthaler (to Maschinenfabrik Scharer). USP 2 858 993, Nov. 4, 1958. (308)

SIZE FOR CELLULOSIC FILAMENT YARNS. J. R. Fallon and S. H. Foster (to Monsanto Chem. Co.). USP 2 859 189, Nov. 4, 1958. (309)

Small amounts of fatty acids are used to modify ammonium salts of copolymers of vinyl acetate and crotonic acid so that they may be used as permanent sizes.

PIRN WINDING MACHINE TRAVERSE MECHANISM. S. Fürst (to Walter Reiners). USP 2 859 918, Nov. 11, 1958. (310)

Grooved rotary drum for guiding the thread in an oscillating movement.

CARTON PARTITIONS FOR REAL AND ARTIFICIAL SILK COPS. J. A. Montgomery and R. D. Morton (to Eastman Kodak Co.). USP 2 860 825, Nov. 18, 1958. (311)

COP TUBE DRIVING CONNECTION. J. V. Keith (to Universal Winding Co.). USP 2 860 838, Nov. 18, 1958. (312)

Means for automatically securing a continuously advancing strand of yarn to the cop spindle.

SIZE BOX TEMPERATURE CONTROL. T. F. Suggs (to Cocker Mach. & Foundry Co.). USP 2 862 280, Dec. 2, 1958. (313)

Temperature control apparatus to prevent solidification of liquid size due to temperature drop at the surface of the size.

TRAVERSE MECHANISM TO PREVENT RIBBON WIND. W. Pool and H. E. B. Young (to Brit. Celanese Ltd). USP 2 862 672, Dec. 2, 1958. (314)

Mechanism for maintaining the package in or out of contact with the traverse drum at different speeds, according to the diameter of the package, in order to prevent ribboning.

Weaving C2

HEDDLE SHAFTS. Grob & Co. AG. BP 800 314, Aug. 27, 1958. Through BCIRA 38: 640 (1958). (315)

The shaft has heddle rails of rectangular cross-section that engage the side members by means of latches in recesses from which they can be removed by flexing them.

WEFT REPLENISHING APPARATUS. G. A. Renshaw. BP 800 543, Aug. 27, 1958. Through BCIRA 38: 640 (1958). (316)

The invention relates to a multiple box loom having a device for replenishing weft in any one of the boxes. The boxes are arranged in the battery in an inclined formation, that is no one box is vertically above another, the weft package is inserted through the top of its box, and the empty bobbin is ejected through a slot in the bottom of the box.

LOOMS WITH SHIELDED GEARS. E. Liebscher, G. Hauptmann, and A. Haupt (to VEB Webstuhlbau Neugersdorf). BP 801 301, Sept. 10, 1958. Through BCIRA 38: 639 (1958). (317)

The driving gears for the lay and picking tappets are supported in bearing plates attached (at 3 points each) to the inner surface of the frame work at each side of the loom.

LOOMS. D. W. Shimwell (to Weaving Research & Textile Comm. Agents Ltd). BP 800 819, Sept. 3, 1958. Through BCIRA 38: 640 (1958). (318)

The invention relates to a loom of the type in which weft is carried from a stationary package by a "spear" provided with a gripper. To avoid retraction of the short length of weft protruding from the spear as the knife comes into play at the selvage, it is proposed to fit the loom with a device (e.g. bar and cam) for controlling the grip at all positions of the spear.

LETOFF MOTIONS FOR LOOM WARP BEAMS. S. F. Benson. BP 800 829, Sept. 3, 1958. Through BCIRA 38: 640 (1958). (319)

The automatic letoff motion comprises (1) a back rail or roller mounted between a pair or double pair of levers pivoted for limited movement in the direction of the warp ends leaving the roller, (2) springs to resist this movement, and (3) a flexible brake actuated by (1) to diminish the braking effect on the beam ruffle as the warp runs off. This diminution is effected (a) by direct attachment of the tighter end of (3) to a pivot joint on (1) and (b) by attachment of the slacker end to a bell-crank lever on the loom frame operated from a second pivot joint on (1) through a strut.

METHOD AND MEANS FOR HOLDING THE WEFT END OF A BOBBIN TO BE INTRODUCED INTO THE SHUTTLE. Rydboholms AB. BP 800 840, Sept. 3, 1958. Through BCIRA 38: 640 (1958). (320)

A device for catching and holding the loose end of a filled bobbin for introduction into a shuttle on a weft replenishing loom comprises a sleeve that temporarily surrounds part of the bobbin, suction and compression means for causing a flow of air along the enclosed part so as to release and whirl up the end of the weft, and a plug for catching the end in the sleeve as this is drawn away.

LOOMS. Sulzer Frères SA. BP 801 109, Sept. 10, 1958. Through BCIRA 38: 640 (1958). (321)

The invention relates to a device for automatically stopping a loom when it has been started again after rectifying a weaving fault, some of the motions having been disconnected, so that the weaver can check that the fault has in fact been put right. The act of disconnecting the motions sets a tripping mechanism to stop the loom after the main shaft has reached a predetermined angular position on starting again.

LOOM WITH VARIABLE HEDDLE SPACE. Maschinenfabrik Rüti AG. BP 801 299, Sept. 10, 1958. Through BCIRA 38: 639 (1958). (322)

The invention relates to a loom construction in which the heddle space is defined in depth between a lay and at least one structural element, at the rear of the loom, mounted for adjustment towards or away from the lay. The "element" may be a tie bar extending between side shields of the loom, or a power transmission shaft. The tie bar may be a hollow casing around the shaft and displaceable with it.

APPARATUS FOR FACILITATING THE STARTING OF LOOMS WITHOUT CHANGING THE PICK. J. Picanol (Belgium). USP 2 858 855, Nov. 4, 1958. (323)

RIBBON LOOMS WITH FIXED WEFT BOBBINS. J. Müller (Switzerland). USP 2 857 934, Oct. 28, 1958. (324)

Rotatably driven catch member for securing the picked weft thread and joining it to a catch thread.

PNEUMATIC SHUTTLE CONTROL MECHANISM. G. Kummer (Switzerland). USP 2 858 856, Nov. 4, 1958. (325)

MOUNTING MEANS FOR THE WARP STOP MOTION DEVICE IN LOOMS. J. Picanol (Belgium). USP 2 858 857, Nov. 4, 1958. (326)

Pivoting arm support for warp stop motion which permits its rapid and accurate adjustment even during loom operation.

WEFT YARN TENSIONING DEVICE. R. F. Parks (to Steel Heddle Mfg. Co.). USP 2 859 779, Nov. 11, 1958. (327)

Self-locking adjusting screw assembly for exerting pressure against the tension pads of a shuttle threading block.

LOOM FOR WEAVING HIGH AND LOW PILE FABRICS. I. O. Moberg. USP 2 860 664, Nov. 18, 1958. (328)

PILE YARN SHOGGING MOTION FOR LOOMS. J. T. MacIsaac, Jr. and F. W. Brey. USP 2 860 665, Nov. 18, 1958. (329)

COMPOSITE PILE WIRE FOR LOOMS. E. F. Clark. USP 2 860 666, Nov. 18, 1958. (330)

Pile wire with two movable superposed loop-forming fingers which may be moved into and out of the loop-forming position for forming varying pile heights.

SHUTTLELESS LOOM. D. W. Shimwell (to Weaving Research & Textile Commn. Agents Ltd). USP 2 860 667, Nov. 18, 1958. (331)

In a loom in which weft from a stationary package at the side of the loom is inserted into the warp shed by a spear, a constant length of yarn between the package and the spear is maintained by a linkage system of elbow form pivoted at one end to the rear of the spear and at its other end to a fixed part of the loom. The weft passes through guides at the pivotal points and at the elbow joint where the links are interconnected.

WOVEN HIGH AND LOW PILE FABRIC. I. O. Moberg. USP 2 860 669, Nov. 18, 1958. (332)

The bights of the individual loops forming the pile extend weftwise over one or more warp yarns and are attached to the base fabric by looping strands of pile yarn warpwise beneath certain weft yarns.

METAL SPUR FOR PLASTIC SHUTTLE. P. C. Consoletti (to Draper Corp.). USP 2 862 526, Dec. 2, 1958. (333)

Knitting C3

YARN CARRIER FOR FULL-FASHIONED HOSIERY MACHINES. E. A. Feustel. USP 2 857 751, Oct. 28, 1958. (334)

KNITTING MACHINE YARN GUIDE. J. J. McDonough (to Scott & Williams Inc.). USP 2 858 684, Nov. 4, 1958. (335)

Metal yarn guides which are arranged to revolve freely so that they are polished rather than cut by the abrasive action of synthetic yarns (i.e. nylon yarns).

ORNAMENTAL KNIT FABRIC. L. E. Sommers (to Zwicker Knitting Mills). USP 2 858 685, Nov. 4, 1958. (336)

Superimposed chain or cable effects are produced on knit fabrics as an integral part of the knitting process on circular machines.

YARN CARRIER FOR FULL-FASHIONED HOSIERY KNITTING MACHINE. E. Porsche (to Jottka Metallwarenfabrik Edgar G. Schob). USP 2 859 602, Nov. 11, 1958. (337)

The carrier has a pair of thread guides, in the form of needles with eyes at their free ends, symmetrically arranged on each side of its axis.

STOP MOTION DEVICE FOR WARP KNITTING MACHINE. A. Edelman and T. Lasar (to Photobell Co.). USP 2 859 603, Nov. 11, 1958. (338)

Scanning device for detecting variations in the fabric and stopping the machine in response to these variations.

SOLID COLOR PATTERN CIRCULAR KNITTING MACHINE. H. H. Marum (to H. E. Crawford Co.). USP 2 860 499, Nov. 18, 1958. (339)

Clutch arrangement in a double cylinder rib top knitting machine for the knitting of a block diamond pattern fabric.

CIRCULAR HOSIERY MACHINE. H. E. Crawford (to H. E. Crawford Co.). USP 2 860 500, Nov. 18, 1958. (340)

Shogging mechanism for producing argyle patterns while the yarns forming the designs are interknitted with the yarns forming the rest of the stocking.

AUTOMATIC WELT TURNING MECHANISM FOR STRAIGHT BAR KNITTING MACHINES. A. J. Cobert. USP 2 860 501, Nov. 18, 1958. (341)

Fabrics C4

ZIPPER TAPE. J. A. Hendley (to Talon Inc.). USP 2 860 668, Nov. 18, 1958. (342)

The integrally woven beaded edge consists of four cords interwoven with double picks of the weft.

TUFTING MACHINE. G. Manning and E. H. Granberry (to West Point Mfg. Co.). USP 2 855 879, Oct. 14, 1958. (343)

Multiple needle tufting machine for applying patterns of sinuous stitch lines to base fabric in an automatic and continuous fashion.

FELT NEEDLE. H. G. Lauterbach (to E.I. du Pont de Nemours and Co.). USP 2 857 650, Oct. 28, 1958. (344)

Rasping profile needle for use in forming synthetic felts by multiple needling.

FUR-LIKE FABRICS. A. F. McNally and W. L. White (to Collins & Aikman Corp.). USP 2 857 652, Oct. 28, 1958. (345)

Woven pile fabric, containing a mixture of normal and highly shrinkable pile yarns, is subjected to shrinkage so that the normal yarns extend above the shrinkable yarns and give a fur-like appearance to the fabric.

NYLON CREPE FABRIC. C. R. Ephland (to Burlington Inds.). USP 2 857 653, Oct. 28, 1958. (346)

Crepe fabrics are prepared by preshrinking and highly twisting nylon yarn, heating with steam and hot water, conditioning, sizing, weaving a fabric, and subjecting the fabric to a heated aqueous creping medium.

PLASTIC COATED INTERWOVEN FABRIC FOR VEHICLE TOPS. S. P. Sexton (to Gen. Tire & Rubber Co.). USP 2 857 654, Oct. 28, 1958. (347)

Double-cloth fabric consisting of upper and lower cross-woven fabrics which are interwoven at closely spaced points. A thin layer of plastic is applied to only one of the two layers.

TUFTING MACHINE BACKING FABRIC FEED. M. M. Beasley (to Cobble Bros. Machy. Co.). USP 2 857 867, Oct. 28, 1958. (348)

Drive mechanism for backing fabric feed rolls which prevents deviation in the rate of feed of the fabric due to acceleration or deceleration of the machine or to the inertia of the fabric supply roll.

APPARATUS FOR PRODUCING GLASS FIBER MATS. G. Slayter (to Owens-Corning Fiberglas Corp.). USP 2 859 506, Nov. 11, 1958. (349)

Apparatus for producing a thin blanket or mat of heterogeneously arranged loops and swirls of a continuous multifilament glass fiber strand, concomitantly with the production of the strand itself, and without intermediate packaging or weaving.

VELVET CARPET LOOM ATTACHMENT. T. T. Janney and G. Y. Jean (to James Lees & Sons Co.). USP 2 859 778, Nov. 11, 1958. (350)

Novel design effects can be achieved without the use of a jacquard by means of an attachment with a head motion which controls the position of the pile harnesses when the bottom shot is being inserted.

FINISHING AND CHEMICAL PROCESSING D

Dyeing and printing D2

STEAMING TEXTILE FABRICS. R. P. Higginbottom. BP 797 541, July 2, 1958. (Addition to BP 779 149). Through BCIRA 38: 510 (1958). (351)

To accelerate the reactions involved in fabric printing, the prepared material is passed through saturated steam in an air-free chamber in which it makes direct contact with extra moisture from a set of 3-phase heat-exchange cylinders and with extra heat (e.g. up to 240° F) from a number of heated rollers. The extra cylinders and rollers are parallel to the usual guide rollers.

COLORING CELLULOSIC TEXTILES. F. R. Alsberg, I. D. Rattee, W. E. Stephen, W. J. Marshall, R. W. Speke, and C. D. Weston (to Imp. Chem. Inds. Ltd). BP 797 946, July 9, 1958. Through BCIRA 38: 509 (1958). (352)

The materials are impregnated with a mono- or polyazo dye that contains at least one ionogenic solubilizing group and also at least one primary or secondary amino group carrying as N- substituent a 1:3:5-triazine radical containing at least one halogen atom attached to a C atom in the triazine ring, and is then treated in aqueous medium with an acid-binding agent.

COLORING CELLULOSIC TEXTILES. F. R. Alsberg, R. N. Heslop, I. D. Rattee, W. E. Stephen, W. J. Marshall, R. W. Speke, and C. D. Weston (to Imp. Chem. Inds. Ltd). BP 798 121, July 16, 1958. Through BCIRA 38: 509 (1958). (353)

The material is impregnated with an anthraquinonoid dye that contains (1) at least one ionogenic solubilizing group and (2) at least one amino or substituted amino group carrying as N-substituent a 1:3:5-triazine radical containing at least one halogen atom attached to a ring C atom, and then treated with an agent that binds acids.

PROCESS FOR DYEING FABRICS BY MEANS OF PIGMENTS. Farbenfabriken Bayer AG. BP 798 437, July 23, 1958. Through BCIRA 38: 509 (1958). (354)

Level and fast dyeings are obtained by padding the fabric (cotton or rayon) with a mixture of (1) a pigment (as an aqueous dispersion), (2) an emulsion of a copolymer such as styrene butadiene/acrylonitrile, (3) an aqueous solution of polyacrylamide (or a copolymer), (4) a formaldehyde-urea, melamine, phenol, or related resin, and (5) an acid-reacting catalyst.

NEW CELLULOSE COLORING PROCESS. T. L. Dawson (to Imp. Chem. Inds. Ltd). BP 800 735, Sept. 3, 1958. Through BCIRA 38: 646 (1958). (355)

Cellulosic materials (particularly cotton and cuprammonium rayon) are fast dyed with basic dyes containing isothiouronium or quaternary ammonium groups after first impregnating them with a mixture of polymerized acrylic acid and an alkali salt thereof.

ALGINATE DIAMMONIUM PHOSPHATE THICKENING COMPOSITIONS FOR TEXTILE PRINTING PASTES. F. Habersberger and J. E. Politi (to Kelco Co.). USP 2 857 236, Oct. 21, 1958. (356)

Mechanical processes D3

ROLL-DRIVING MECHANISM FOR A NAPPING MACHINE. T. A. Dourdeville (to David Gessner Co.). BP 799 281, Aug. 6, 1958. Through BCIRA 38: 612 (1958). (357)

In a planetary type of napping machine (with pile and counter-pile sets of rollers), a hydraulic motor is used to control the rotation of each set, each motor being supplied by constant-volume means. The supply pressure of one motor (e.g. that for the counter-pile set) and the discharge pressure of the other motor can be separately and manually regulated, according to gages.

WORKER ROLLER NAP-RAISING MACHINE. Etab. A. C. Scholaert. BP 799 451, Aug. 6, 1958. Through BCIRA 38: 612 (1958). (358)

The special feature of the machine is that it is fitted with a device for adjusting and permanently indicating the "intensity of scratching"--a resultant of the relative speeds of the fabric, the drum, and the worker rollers.

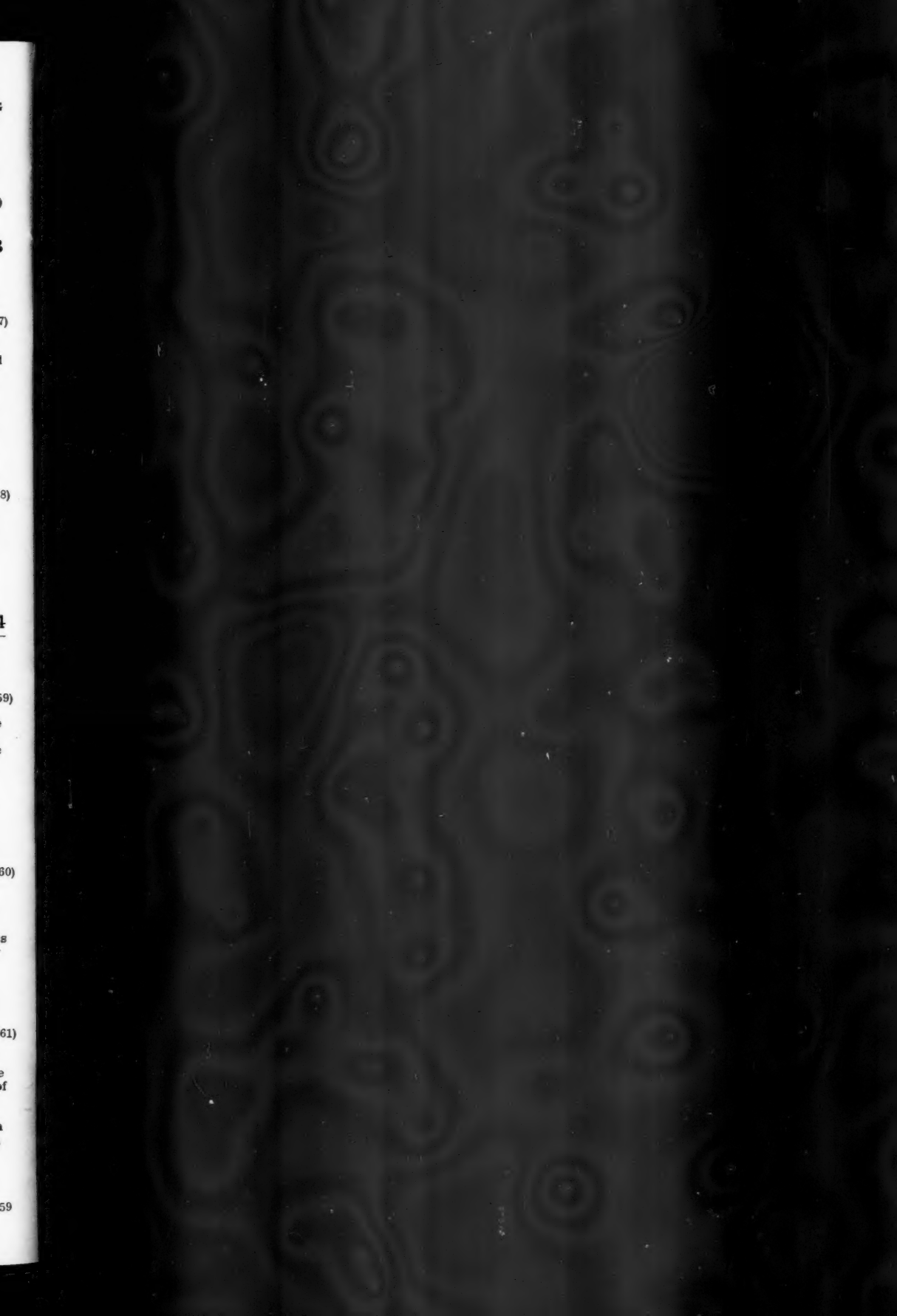
Drying, setting, conditioning D4

CELLULOSE TRIACETATE SET IN THREE-DIMENSIONAL FORM. D. Finlayson, B. Krzesinski, and D. Thorley (to Brit. Celanese Ltd). BP 797 661, July 9, 1958. Through BCIRA 38: 511 (1958). (359)

Articles containing 30-100% of cellulose triacetate are set in 3-dimensional form by heating them on formers in steam or water at 120-160° C. The examples relate to knitted garments and brassieres. The effect is ascribed to increasing the degree of crystallinity of the acetate.

SIEVE DRUM DRYER FOR DRYING A CONTINUOUS FLEECE. H. Fleissner and G. Fleissner. BP 799 832, Aug. 13, 1958. Through BCIRA 38: 613 (1958). (360)

The invention relates to a drying machine in which suction drums are arranged in two parallel rows and the fleece passes alternately over the top of a top drum and under the next drum, in the lower row, parts of the sieves not covered by the fleece being closed by fixed plates.

HEAT TREATMENT OF FILAMENTS, FIBERS, THREADS, FILMS AND SHEETS. F. G. Audas (to Brit. Rayon Research Assoc.). BP 800 091, Aug. 20, 1958. Through BCIRA 38: 612 (1958). (361)

The invention relates to a "fluidized bed" on which a process requiring the application of dry heat (e.g. dye fixation) may be carried out on materials of the type of nylon or Terylene. The bed is formed of particles (e.g. sand) of diameter between 100 and 200 microns and the upward current of hot gas (e.g. air) is of such velocity that the particles are in a state of suspension without being swept away.